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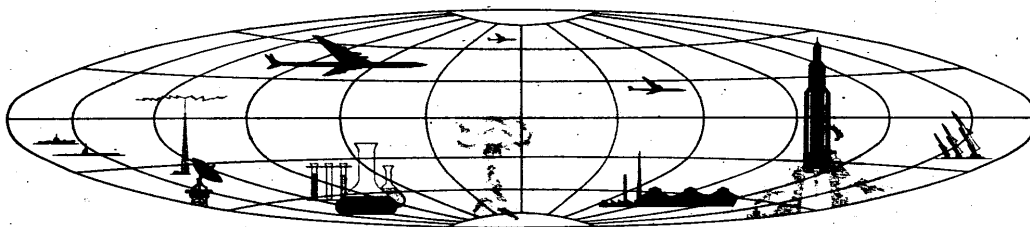
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PHOTOGRAPHIC INTERPRETATION REPORT

LAUNCH COMPLEX C,
KAPUSTIN YAR/VLADIMIROVKA
MISSILE TEST CENTER, USSR



NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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PREFACE

This photographic interpretation report has been prepared as a partial answer to a general requirement for a detailed analysis of the Kapustin Yar/Vladimirovka Missile Test Center [REDACTED] derived from [REDACTED] photography.

For purposes of this report, where not otherwise specified, [REDACTED] photographic interpretation is discussed in the past tense and [REDACTED] in present tense. Future tense in general is used to indicate the time frame from [REDACTED] on, and should not be projected from the date of publication of the report.

The surface-to-surface missile (SSM) launch facilities in the Kapustin Yar/Vladimirovka Missile Test Center (KY/Vlad MTC) consist of the following complexes: Launch Complexes A, B, C, D, E, F, and G and the Rocket Launch Complex (Figure 1). The former V-2 launch site, later abandoned, is also located in the area of the SSM facilities.

- iii -

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TABLE OF CONTENTS

	Page
Preface	iii
Summary	1
Introduction	2
Launch Area 1C	2
Launch Site	2
Field Troop-Training Sites	6
Launch Area 2C	6
Launch Site 2C-1	9
Launch Site 2C-2	10
Support Facilities	10
Launch Area 3C	10
Launch Site	10
Dumbbell Configuration	14
Operational Missile Support Facilities	15
Final Checkout Area 1C	15
Final Checkout Area 3C	16
Warhead Handling and Checkout Area West	18
Warhead Handling and Checkout Area East	19
Final Assembly and Checkout Area, Under Construction	20
Nonoperational Support Facilities	22
Administration, Housing, and Service Area	22
Additional Administration, Housing, and Service Area, Under Construction	24
Bivouac Area	25
Electronic Sites	25
Launch Complex C Instrumentation Sites	25
Operations Control Center	26
Site C-2	27
Site C-3	28
Instrumentation Sites C-4 and C-5	29
Near-Range Interferometer-Type Instrumentation Sites	30
Lake Elton Interferometer Site	30
Verkhniy Baskunchak Interferometer Site	31
Possible Interferometer Site, Under Construction	32
Rangehead Communications Site, Under Construction	33
References	34

LIST OF ILLUSTRATIONS

	Page
FIGURE 1. KAPUSTIN YAR/VLADIMIROVKA MISSILE TEST CENTER	Facing 1
FIGURE 2. LAUNCH COMPLEX C	1
FIGURE 3. LAUNCH AREA 1C, DECEMBER 1959	3
FIGURE 4. LAUNCH AREA 1C.	4
FIGURE 5. LAUNCH AREA 2C, DECEMBER 1959	7
FIGURE 6. LAUNCH AREA 2C.	8
FIGURE 7. LAUNCH AREA 3C, DECEMBER 1959	12
FIGURE 8. LAUNCH AREA 3C.	13
FIGURE 9. FINAL CHECKOUT AREA 1C.	16
FIGURE 10. FINAL CHECKOUT AREA 3C.	17
FIGURE 11. WARHEAD HANDLING AND CHECKOUT AREA WEST	18
FIGURE 12. WARHEAD HANDLING AND CHECKOUT AREA EAST.	20
FIGURE 13. FINAL ASSEMBLY AND CHECKOUT AREA , UNDER CONSTRUCTION	21
FIGURE 14. ADMINISTRATION, HOUSING, AND SERVICE AREA. .	23
FIGURE 15. ADDITIONAL ADMINISTRATION, HOUSING, AND SERVICE AREA, UNDER CONSTRUCTION	24
FIGURE 16. ELECTRONIC SITES	26
FIGURE 17. OPERATIONS CONTROL CENTER (SITE C-1)	27
FIGURE 18. INSTRUMENTATION SITE C-2	28
FIGURE 19. INSTRUMENTATION SITE C-3.	28
FIGURE 20. INSTRUMENTATION SITE C-4.	29
FIGURE 21. INSTRUMENTATION SITE C-5.	30
FIGURE 22. VERKHNIY BASKUNCHAK INTERFEROMETER SITE	31
FIGURE 23. POSSIBLE INTERFEROMETER SITE, UNDER CONSTRUCTION	32

- v -

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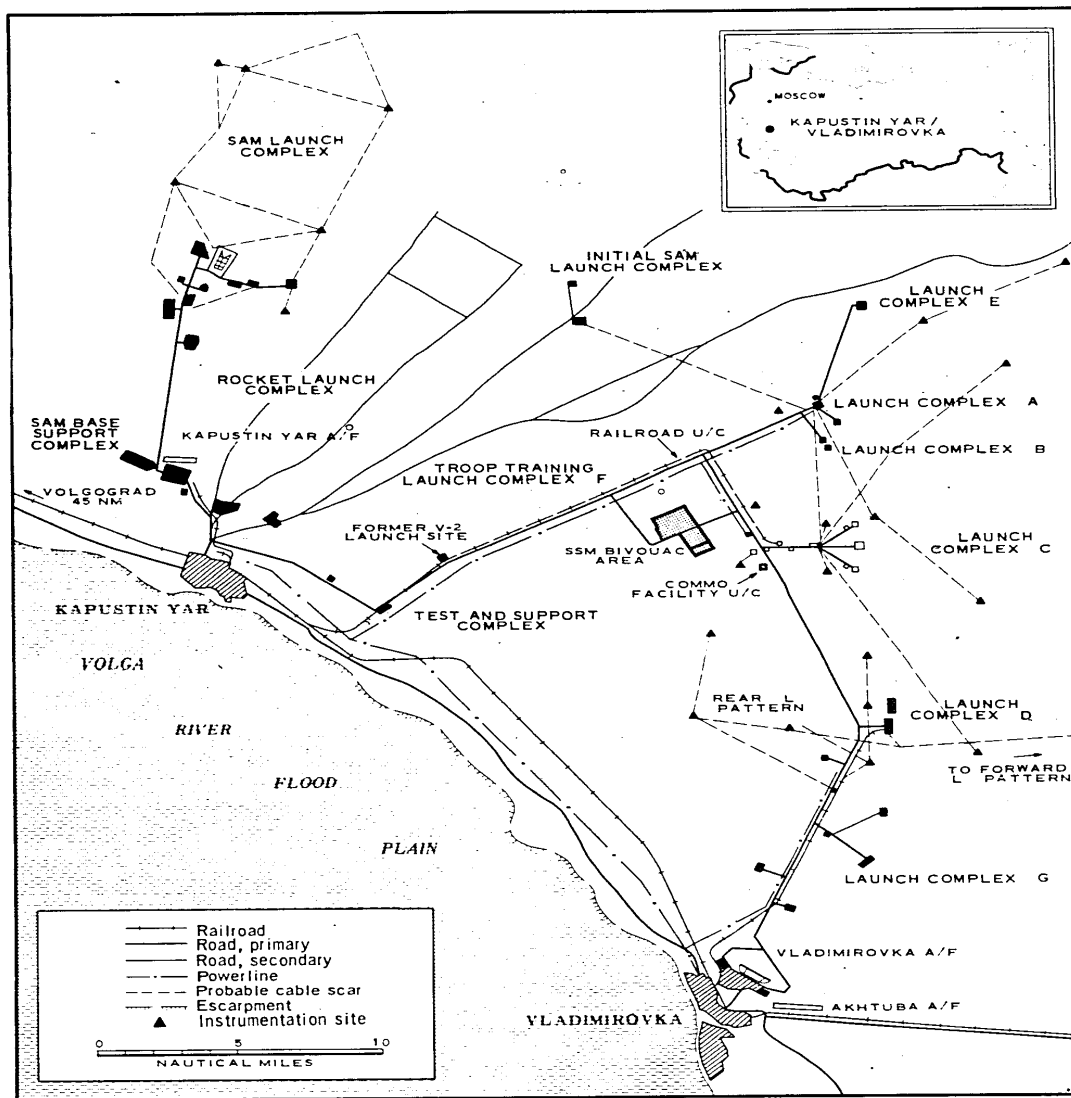


FIGURE 1. KAPUSTIN YAR VLADIMIROVKA MISSILE TEST CENTER.

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SUMMARY

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Photography of [REDACTED] revealed a major SSM launch complex at the KY/Vlad MTC. This launch complex, designated Launch Complex C, included in [REDACTED] two launch areas (1C and 3C) consisting of four launch pads, two final checkout areas, two warhead handling and checkout areas, an administration, housing and service area, and instrumentation sites.

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On [REDACTED] photography, a number of changes were noted at Complex C. A new launch area (2C) was under construction. The area was to have two launch pads. In addition, a number of field-type launch positions were added northeast

of Launch Area 1C. A new railroad-served final assembly and checkout area was under construction at the time of the photography. A permanent communications facility and a new administration and housing area were under construction. A large bivouac area also was present in the western section of Launch Complex C. Two interferometer sites and a third possible interferometer site under construction, all added between the [REDACTED] coverages, also are discussed here under Complex C, as part of their function is to serve Complex C.

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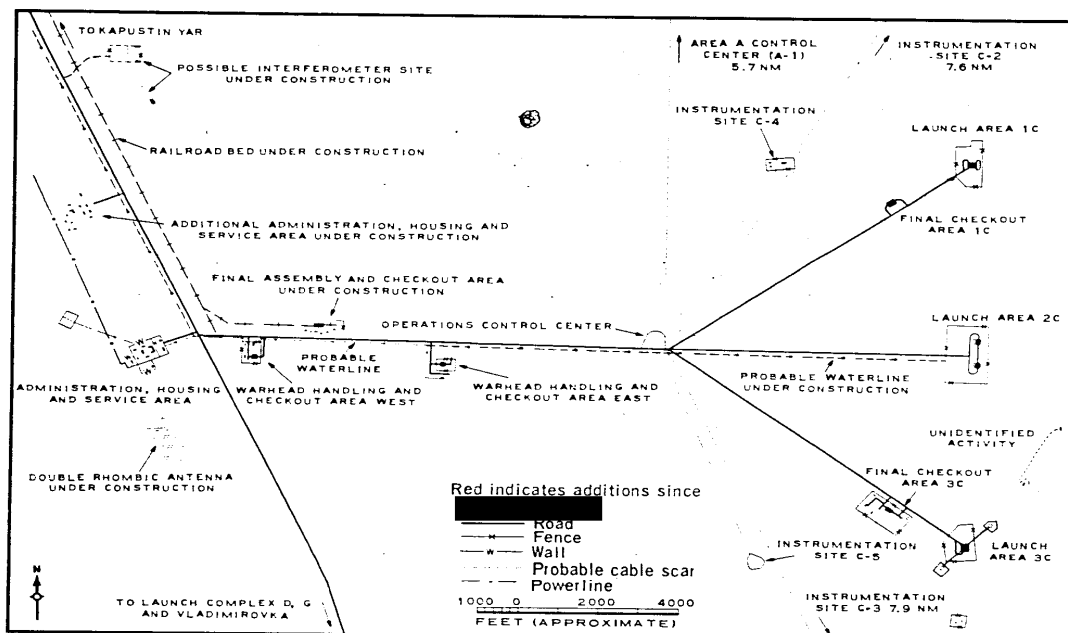


FIGURE 2. LAUNCH COMPLEX C.

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INTRODUCTION

Launch Complex C (Figure 2), at 48-35-03N 46-16-00E, the largest of the SSM facilities, is approximately in the center of the launch complexes. The photography indicates that the complex was operational and active in [REDACTED] and was being expanded in [REDACTED] the complex was entirely road served; in [REDACTED] a rail line under construction

paralleled the main road to the complex from the Test and Support Complex 15 nm west. There is evidence that this rail line was to be extended southward. This launch complex contains launch areas; support areas, for both operational and nonoperational missile support; and instrumentation sites.

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LAUNCH AREA 1C

Launch Area 1C (48-36-50N 46-17-40E), located at the terminus of an all-weather road which leads northeast from the Operations Control Center (Site C1), consists of a double-fenced launch site and four or possibly five field troop-training sites (Figures 3 and 4). In [REDACTED] only the launch site existed and at that time it appeared inactive. On [REDACTED] photography this site was very active with most, if not all, of a single SS-4 battalion engaged in a training exercise. Checkout and launch equipment for a complete battery was in position on or near the pad. Most of the additional equipment to complete a four-battery battalion was parked near the drive-through building of Final Checkout Area 1C located 2,500 feet to the rear of Launch Area 1C. The field training sites, added since [REDACTED] were inactive at the time of the [REDACTED] photography but showed extensive signs of recent vehicular activity.

The launch site appeared to be primarily a research and development facility in [REDACTED]. However, the addition by [REDACTED] of the field troop-training sites and the exercise observed in progress indicate that Launch Area 1C also was being used for troop training.

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LAUNCH SITE

The launch site is irregularly shaped, measures 1,415 by 770 feet, and encompasses about 25 acres. Security is provided by two fences, four guard towers, and a security building. Major facilities within the site are a large, square, concrete launch pad, a control bunker, three vehicle revetments, three vehicle bunkers, an earth revetment, and an earthen bunker. A good internal road network serves many of these facilities.

The most significant items found on the [REDACTED] coverage are the SS-4 battalion exercise and new vehicle tracks leading from Final Checkout Area 1C around each side of the fenced launch site to new access gates on the east side. A detailed description of facilities at the launch site follows (item numbers and letters keyed to Figure 4).

Item 1--Launch Pad. The launch pad is concrete, 185 feet square, and appears to be raised slightly above ground level. A contiguous concrete apron extends 100 feet north from the pad and abuts the control bunker (Item 2); it contains a vehicle revetment with a 50-foot

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FIGURE 3. LAUNCH AREA 1C, [REDACTED]

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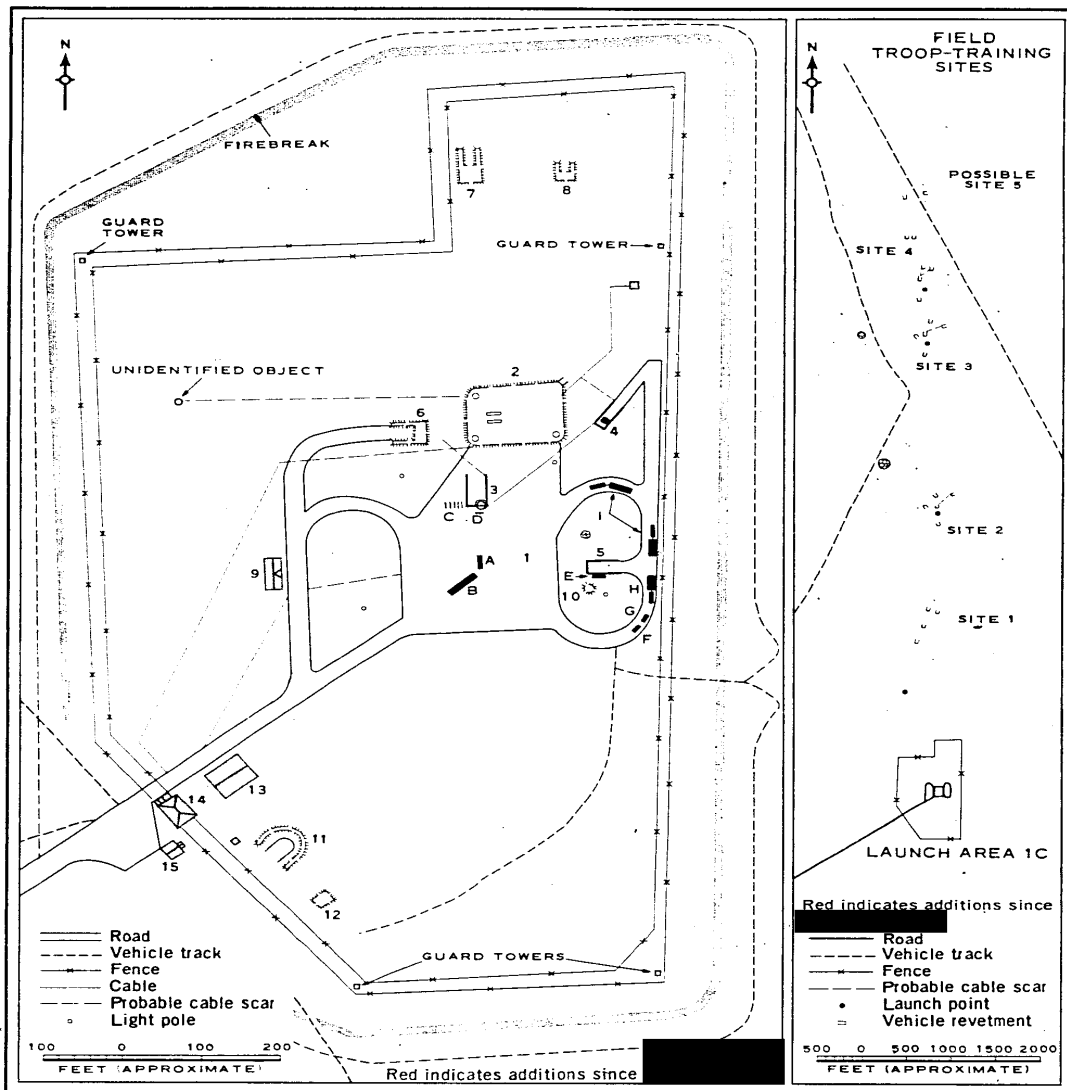
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ramp which appears to extend under the pad. Access to the pad is provided by a concrete loop road, 20 feet wide, which joins the pad at the northwest and southwest corners. Another concrete loop road runs east from the pad and serves associated revetments. Around the pad are five light poles, 120 to 200 feet from the pad center. A probable cable scar runs from the access road into the west side of this launch pad.

25X1D On [REDACTED] photography a launch platform was
25X1D positioned on the center of the pad. On [REDACTED]
25X1D [REDACTED] photography, equipment on or adjacent to the pad consisted of a launch platform (A), mobile launcher/erector (B), five checkout/support vans (C), a support van (D), a mobile service platform (E), an oxidizer transport truck (F), a probable water truck (G), a fuel transport trailer (H), 2 oxidizer transport trailers (I), and various smaller unidentified objects.

Item 2--Control Bunker. The control bunker, 225 feet north of the launch point, is semiburied. The bunker is approximately 130 by 100 feet and probably is of concrete construction. On the roof, near the center of the bunker, are two probable periscope-type objects. The entrance is on the northeast corner and a possible ventilator is at each of the other three corners. A probable cable scar runs from the control bunker to the access road just inside the fenced area. A second probable cable scar leading northeast connects with a small building. A branch from this scar extends to a vehicle revetment (Item 4) just east of the control bunker. A third probable cable scar leads 350 feet west from the control bunker and connects with an unidentified object about 10 feet in diameter.

Items 3, 4, and 5--Vehicle Revetments. These revetments have concrete ramps, and their closed ends are oriented toward the center

of the pad. The largest (Item 3), which is on the apron and abuts the north side of the pad, is about 50 by 30 feet. It is possibly used as an entry to facilities beneath the pad and may also be a propellant servicing point. A probable cable scar runs from this revetment past the control bunker to a vehicle bunker (Item 6). A cable runs from this revetment to another revetment (Item 4). This second revetment, which contains a possible generator, is 50 by 15 feet, is 300 feet northeast of the launch platform, and is served by an extension of the eastern loop road. The third revetment (Item 5) is east of the pad and also measures 50 by 15 feet. Immediately south of this revetment is a semiburied tank (Item 10).

Items 6, 7, and 8--Vehicle Bunkers. These three drive-in bunkers, which are earth covered, have wide vehicle-entry ramps and probably can hold two vehicles abreast. One bunker (Item 6) is about 40 feet west of and oriented toward the control bunker. Its covered portion is 25 by 15 feet and its ramp is 30 by 25 feet. The other two vehicle bunkers (Items 7 and 8) are oriented toward and about 400 feet north of the launch pad (within the extension of the original fenced area). The covered portion of the larger bunker (Item 7) is 35 by 30 feet and the ramp is 35 feet long. The covered portion of the smaller bunker (Item 8) is 20 by 15 feet and the ramp is 25 feet long. Unimproved roads serve the three bunkers.

Item 9--Building. This gable-roofed building, 50 by 20 feet, is just off the loop road and 250 feet west of the launch point. The building has a dormer facing the launch pad.

Item 10--Tank. This semiburied, earth-mounded tank is approximately 25 feet in diameter.

Item 11--Earthen Revetment. This large earthen revetment, U-shaped with inside measurements of approximately 50 by 40 feet, is near the southwest fence. It is oriented with its open

- 5 -

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end away from the pads and contains unidentified equipment.

Item 12--Earthen Bunker. A 20-foot-square earthen bunker is 50 feet southeast of the U-shaped revetment (Item 11). The entrance is on the west side. Evidence of much personnel traffic between the bunker and the U-shaped revetment appeared on the [REDACTED] coverage.

Item 13--Building. A single-story gable-roofed building, 65 by 50 feet, is adjacent to the security building (Item 14). This building may be an administration or general utility building for the launch area.

Item 14--Security Building. This building, adjacent to the gate at the main access road, is 40 by 35 feet and has a 15-foot-square extension facing the road. This arrangement of buildings (Items 13 and 14) is typical of the security arrangement at most of the launch sites throughout the rangehead.

Item 15--Building. Small gable-roofed building with an eastward extension. It is located immediately outside the fenced area and is [REDACTED] overall.

FIELD TROOP-TRAINING SITES

Between [REDACTED] four field troop-training sites and a possible fifth (Figure 4) were constructed immediately north of the launch site. These sites are positioned along a north-south line that extends over a distance of ap-

proximately 1.2 nm. The sites were inactive at the time of the [REDACTED] photography but the entire area between them and the entrance to the launch site was heavily scarred by vehicular traffic. Although only two of the sites are similar in layout and facilities, together they resemble the training sites at Launch Area A of Launch Complex A. Detailed descriptions of the sites follow.

Site 1. This site includes four vehicle revetments and a probable graded launch point. In contrast to the other sites, the probable launch point is somewhat distant from the revetments, being approximately 700 feet from the nearest one.

Sites 2 and 3. Each of these two sites contains a launch point, five vehicle revetments, a probable cable scar, and a personnel trench. The distance between the two launch points is 2,300 feet.

Site 4. This site contains a launch point, six vehicle revetments, a personnel trench, and two probable cable scars. It differs from Sites 2 and 3 in that there are only four vehicle revetments near the launch point; the other two revetments are 720 feet north of the launch point.

Site 5. This site, consisting of only two revetments, is considered as a possible training site, since the revetments appear not to be related to any of the other sites, and there is no launch point.

LAUNCH AREA 2C

Launch Area 2C (48-35-54N 46-17-40E), under construction in [REDACTED] is located at the terminus of an all-weather road, new since [REDACTED] running east from the Operations Control Center (Figures 5 and 6). It is a rectangular single-fenced area, 1,700 by 1,200 feet,

covering about 47 acres. There was no evidence in [REDACTED] that this launch area would be constructed. The area, which is centered between Launch Areas 1C and 3C, about 4,150 feet from each, includes two nearly identical launch sites, arbitrarily designated 2C-1 and 2C-2, and

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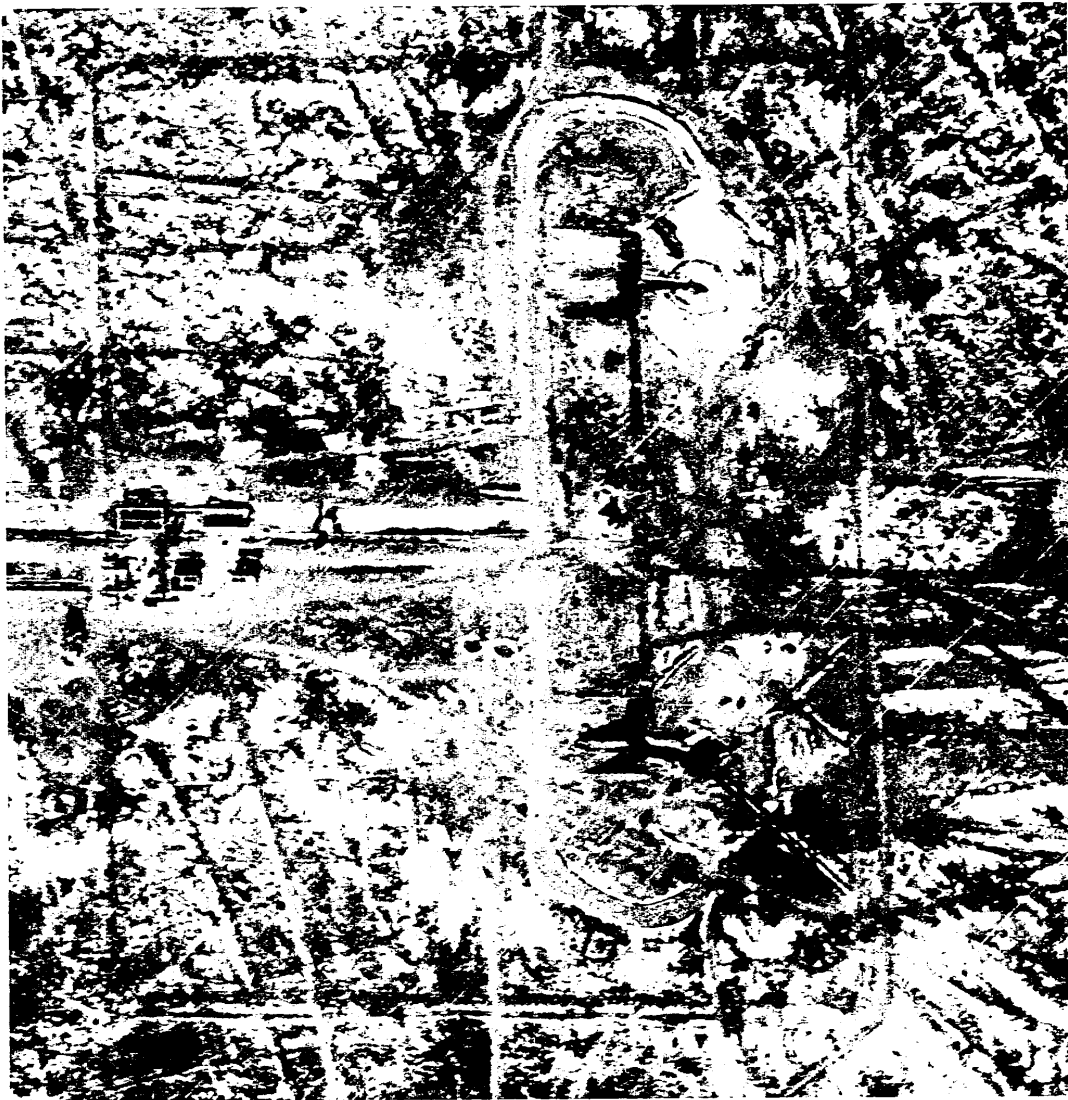


FIGURE 5. LAUNCH AREA 2C, [REDACTED]

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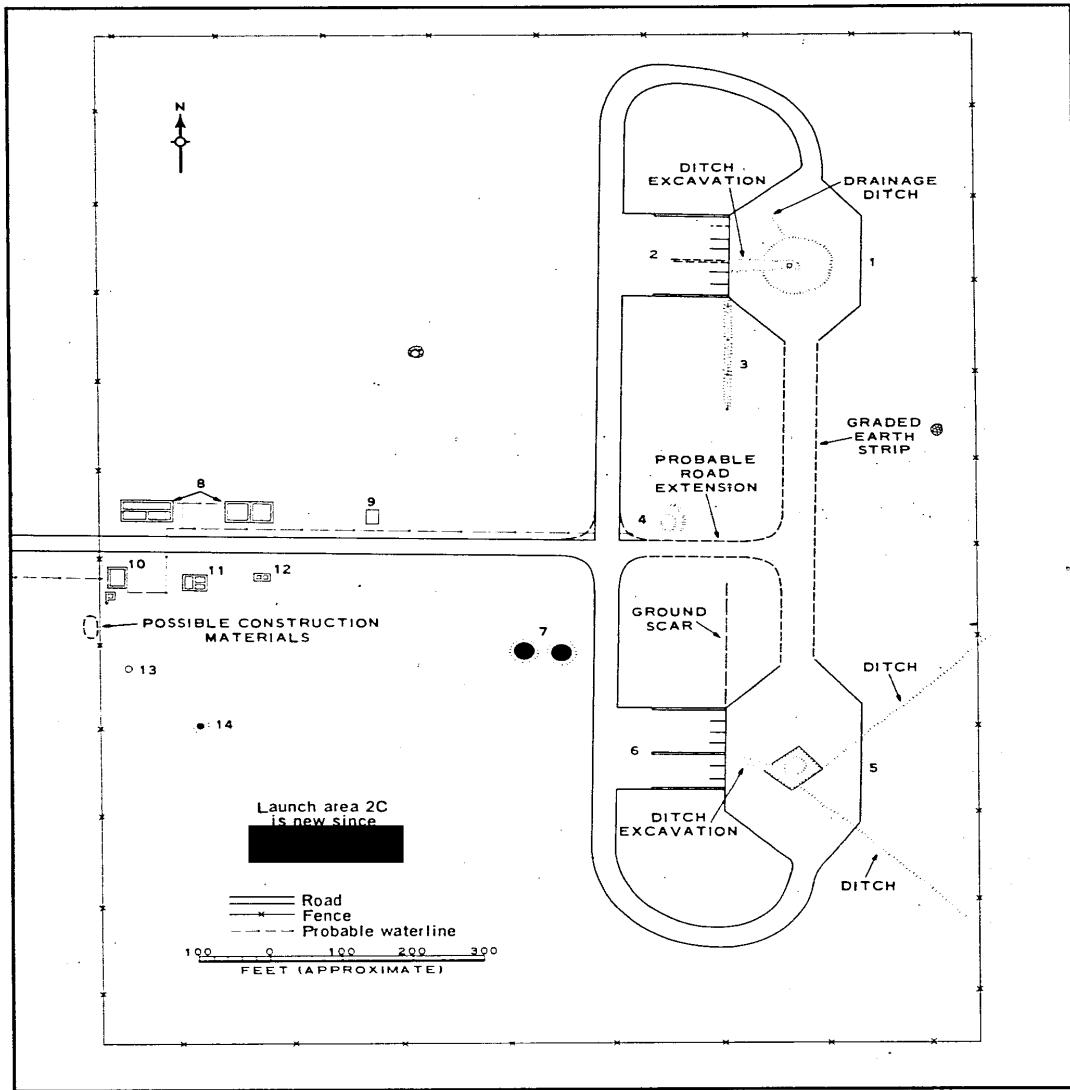


FIGURE 6. LAUNCH AREA 2C.

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several general support and maintenance buildings.

In physical aspect the launch sites differ radically from those at the other SSM launch complexes. Two large hexagonal launch pads and two seven-bay vehicle bunkers are the outstanding features. Most of the facilities were 50 to 75 percent complete at the time of the photography, and the launch area probably should have been operational by the summer of

A new probable waterline, under construction, paralleling the road to the launch area, could be part of an entirely new waterline serving the complex.

The road which serves the launch area enters from the west and forms a T near the center. From this point the road extends north and south and loops to provide access to the launch pads. Where the road tees, the northwest and northeast corners form right angles while at the opposite corners there are wide-radius turns. However, it is believed that on completion of the waterline all corners will also be provided with wide-radius turns and that the entrance road will be extended to join the graded earth strip that connects the two sites. At the time of the photography, the loop service road did not appear paved. The two launch sites are in slightly varying stages of construction, are about 850 feet apart from center to center, and are connected by a graded earth strip 45 feet wide.

LAUNCH SITE 2C-1

This site, in the northern half of the launch area, contains the following items (keyed to Figure 6):

Item 1--Launch Pad. The launch pad, which had a packed-earth surface at the time of the photography, measures 270 by 185 feet overall.

Considerable construction activity is evident on the pad. A ditch excavation, possibly for cable lines, leads from the center of the pad to the third bay from the south, of the seven-bay vehicle bunker. The ditch excavation is approximately 15 feet across at ground level, but the depth and the width at the base cannot be determined because of shadow. Near the center of the pad and within the excavation is a square hollow object about 10 feet on a side. The top of this object is flush with or slightly above ground level. Much of the construction in the center of the pad may be for a firing table or platform or for servicing erection apparatus.

Item 2--Multiple-Bay Vehicle Bunker. This bunker, 140 feet long and 30 feet wide, abuts the western edge of the launch pad. It has seven bays, each about 30 by 20 feet. It is assumed that eventually the bunker will be covered, but at the time of the photography the top or roof had not been started. A ramp approximately 120 feet long provides access to the bunker from the service road.

Item 3--Water Pipeline Under Construction. At the time of the photography, the pipe was in position in an open ditch leading from the southeast corner of the vehicle bunker and terminating 200 feet south. A probable counterpart to this line extends from the northeast corner of the vehicle bunker (Item 6) at Launch Site 2C-2. If these lines were extended, they would connect and form a T with the probable waterline entering the launch area from the west, if it, too, were extended.

Item 4--Construction Activity. This area of construction activity is marked by a short angular ditch and a small earth mound. The activity may be related to either water or power facilities. Also, this area would be an excellent location for a control bunker, since it is between and almost equidistant from the two launch sites.

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LAUNCH SITE 2C-2

This site, in the southern half of the area and a near twin to Site 2C-1, contains the following items (keyed to Figure 6):

Item 5--Launch Pad. This pad is quite similar to the one at Site 2C-1 (Item 1). Its width is the same, 185 feet, but its overall length is 340 feet. The pad is in the midstage of construction. Near the pad center is a 60-foot-square excavation. Leading from the excavation is a ditch excavation approximately 20 feet across at ground level. The depth and the width at the bottom cannot be determined because of shadow. The ditch excavation leads to the third bay from the south, of the vehicle bunker.

Item 6--Multiple-Bay Vehicle Bunker. This bunker is similar to the one at Site 2C-1 (Item 2). A ground scar leads from the northeast corner of the bunker toward the water pipeline under construction at Site 2C-1 (Item 3).

Item 7--Two Circular Excavations. These two excavations, 30 feet in diameter, were under

construction in [REDACTED]. In addition, a number of unidentified vehicles/pieces of equipment were observed throughout the launch area.

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SUPPORT FACILITIES

The support facilities for the launch area were in varying stages of construction when photographed. These items, all near the entrance to the area, include two buildings (Item 8) 70 by 35 feet, a building 20 by 15 feet (Item 9), a security building (Item 10) 40 by 35 feet, and a small building nearby; a building (Item 11) 40 by 35 feet; a building (Item 12) 35 by 20 feet and about two and a half stories, and an area of activity containing a possible standpipe or tank under construction (Item 13) 10 feet in diameter and an isolated circular excavation 10 feet in diameter (Item 14) enclosed by a low parapet. Outside the security fence south of the access road is a stack of possible construction materials.

LAUNCH AREA 3C

Launch Area 3C (48-34-58N 46-17-40E), located at the terminus of an all-weather road which leads southeast from the Operations Control Center, contains a double-fenced launch site, a dumbbell configuration, and two field troop-training sites, with all facilities inter-related (Figures 7 and 8). All facilities were present in [REDACTED] except one of the troop-training sites, and generally the area was very active. A missile [REDACTED] long and 5 feet in diameter in a vertical position was being readied for firing at the launch site. On [REDACTED] photography no activity was observed. The launch area, as defined by fencelines and vehicle tracks, encompasses about 125 acres overall and is gen-

erally oriented northeast-southwest.

Launch Area 3C has many of the same features as Launch Area 1C. It is possible that they were constructed about the same time and are being expanded as the need arises.

LAUNCH SITE

The launch site measures 1,200 by 840 feet overall and encompasses about 23 acres. Security provisions include a 35-foot-wide fire-break, two fences, four guard towers, and a security building. The entrance is in the northwest corner where the main access road enters the launch area. The major features are a

- 10 -

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large square concrete launch pad, a control bunker, four vehicle bunkers, and three vehicle revetments. Numerous probable cable scars and two earth-mounded probable cable conduits interconnect various items within the launch site. No significant permanent facilities were added to the site between the [REDACTED] photography.

The site includes many facilities similar and in some cases identical to ones at the launch site of Launch Area 1C. The most obvious similarities are the size and orientation of the launch pad and the sizes and orientations of many of the bunkers and revetments. The dumbbell configuration and the troop-training sites apparently were not constructed at the same time as the launch site.

The fenceline was extended in the northeast corner to include two vehicle bunkers. This was also done at the launch site of Area 1C. Two items outside the fence around the launch site but connected to it by probable cable scars and vehicle tracks are discussed with the launch area proper. A detailed description of items at the launch area proper follows (item numbers keyed to Figure 8).

Item 1--Launch Pad. The pad is square and measures about 185 feet on each side. It appears slightly raised, has sloping sides, and is of concrete construction. As with the launch pad at Launch Area 1C, access is by a 20-foot-wide concrete loop road which joins the pad at the northwest and southwest corners. In [REDACTED] the ground around the loop road and pad was heavily scarred by tracks, [REDACTED]. In [REDACTED] the pad was clear of vehicles, equipment, and objects and there were no vehicles in the area.

In [REDACTED] in contrast to the launch site at Area 1C, the site at Area 3C was very active. A missile [REDACTED] long and 5 feet in diameter was erected in the center of the pad. Just

southwest of the missile and at an angle to the control bunker was a wedge-shaped structure, possibly a flame deflector, 30 feet long and 15 feet high. The face of the structure, although in shadow, is believed to be vertical. It does not appear on the [REDACTED] coverage.

In [REDACTED] adjacent to the missile on the northeast were two parallel objects [REDACTED] long and [REDACTED] wide, possibly either vehicles or walls. Northeast of and in line with these objects was a possible erector mechanism 35 to 40 feet long, with a possible crane or tower near its midpoint. A possible vehicle was parked at the northeast corner of the pad. All the items on the pad were aligned with the arms of the dumbbell configuration.

Item 2--Control Bunker. The control bunker, which abuts the south side of the pad, is nearly square and measures about 60 feet on a side. It is earth mounded and its top is above the level of the pad. A 10-foot-wide ramp on the south side leads into the bunker.

Items 3, 4, and 5--Vehicle Revetments. Each of these three concrete-ramped vehicle revetments has a counterpart at the launch site of Area 1C (Figure 4, Items 3, 4, and 5). In size and orientation to the launch pad, each revetment is the same or similar to its counterpart. The largest revetment (Item 3) is 45 by 30 feet and abuts the north side of the pad. After the [REDACTED] coverage, a small square area was constructed in front of the revetment and on the pad. Probable cable scars run from near this revetment to another vehicle revetment (Item 4) and two vehicle bunkers (Items 7 and 9). The second revetment (Item 4), 50 by 15 feet, is about 300 feet from the launch pad and at an angle to it. The third revetment (Item 5), also 50 by 15 feet, is 140 feet from the launch pad. This is the only revetment served by a concrete road.

Items 6, 7, 8, and 9--Vehicle Bunkers. Of the four vehicle bunkers in the fenced launch

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FIGURE 7. LAUNCH AREA 3C.

- 12 -

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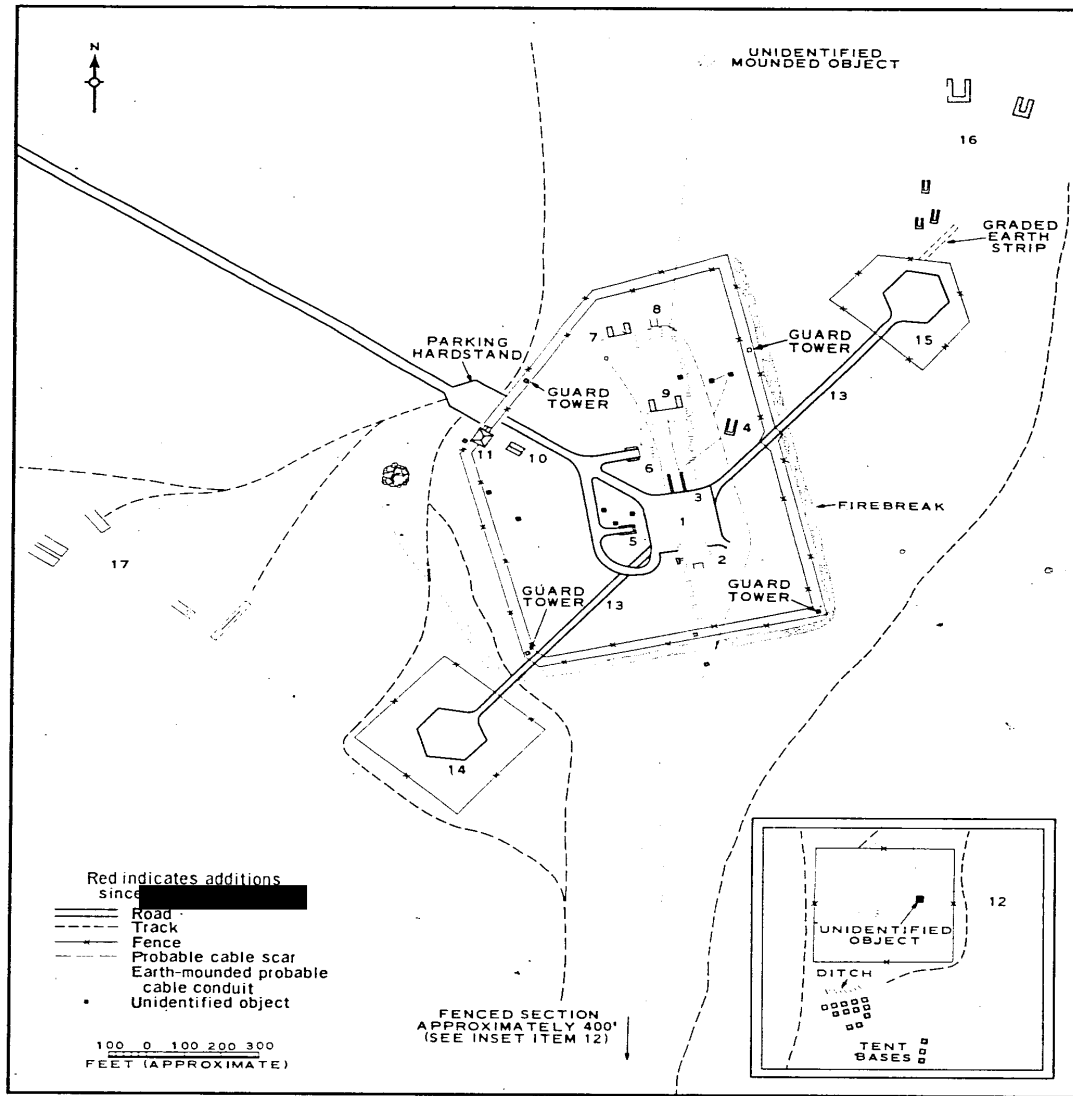


FIGURE 8. LAUNCH AREA 3C.

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site, three have counterparts at the launch site of Area 1C (Figure 4, Items 6, 7, and 8). One of the three (Item 6) has a ramp 30 feet square and a covered section 30 feet square. It is about 250 feet from the launch pad and is the only bunker served by a good concrete road. The other two (Items 7 and 8) are approximately 600 feet from the launch pad in an area that is an apparent enlargement of the fenced area present before the

25X1D [redacted] photography. The larger of these two bunkers (Item 7) has a ramp 40 feet square and a covered portion 55 by 40 feet. The adjacent bunker (Item 8) has a ramp and covered portion each measuring 40 by 10 feet, and was enclosed by an earth revetment in [redacted]. This revetment is not apparent in [redacted].

The most prominent vehicle bunker (Item 9) has no counterpart at Launch Area 1C. The bunker is about 300 feet from the launch pad. Its ramp is 60 feet wide and 40 feet long and the covered portion is 60 by 30 feet. It could easily accommodate more than three vehicles abreast.

Item 10--Building. This single-story gable-roofed building measuring 45 by 30 feet is adjacent to the security building (Item 11). This building may be an administration or general utility building for the launch area. There is a similar building (Figure 4, Item 13) at Launch Area 1C.

Item 11--Security Building. The security building, which is adjacent to the gate at the main access road, is hip-roofed, measures 40 by 35 feet, and has a 15-foot-square extension facing the road. It is identical to the one at Launch Area 1C. Just beyond the fences is a parking hardstand which contained four unidentified vehicles in [redacted].

25X1D Item 12--Fenced Section. This fenced section, 1,700 feet south of the launch site, is connected to it by a probable cable scar and vehicle tracks. It is 365 feet square and contains a semiburied building 35 by 20 feet and an un-

identified object 15 feet square on a small hardstand. Just south of the fence is a ditch 110 by 15 feet and 15 tent bases, 3 of which were occupied in [redacted].

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DUMBBELL CONFIGURATION

This unique configuration consists of two fenced, flat hexagonal structures (Items 14 and 15) identical in size and shape, connected by an armlike extension (Item 13). From center to center, the structures are about 1,900 feet apart and, with the connecting arm, are oriented northeast-southwest.

The exact nature and purpose of the dumbbell configuration have not been determined and the configuration showed no change in the [redacted] months between photographic coverages.

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Item 13--Armlike Extension. The armlike extension appears to be a [redacted] wide roadway which provides access to the hexagonal structures. It is flat, slightly above ground level, and possibly coated with a dark substance. The extension intersects the launch pad near the northeast and southwest corners at an elevation slightly below the level of the pad. The loop road serving the pad crosses over the southwest arm. The two security fences around the launch site have gates across the armlike extensions which cross these extensions at right angles even though this causes jogs in the fences.

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Item 14--Southwest Hexagonal Structure. This structure, enclosed by a fence 365 by 350 feet, is 100 feet on a side and about 165 feet across. The structure, as well as the northeast one and the extension connecting them, is slightly elevated and possibly coated with a dark substance.

Item 15--Northeast Hexagonal Structure. This structure has the same dimensions as its counterpart but is enclosed by a five-sided fence 350 feet on its longest side and 200 feet on the

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NPIC R-1183/64

25X1D other four sides. Some time before [REDACTED]
 25X1D [REDACTED] it had apparently been enclosed by a square
 fence 350 feet on a side. The change may have
 been necessitated by the construction of two
 earthen vehicle revetments. These appear on
 both coverages and are part of a field troop-
 training site (see below).

25X1D Items 16 and 17--Field Troop-Training
 25X1D Sites. One of the field troop-training sites (Item
 16), near the northeast hexagon, was present in
 [REDACTED] The other (Item 17), near the southwest
 hexagon, was added after [REDACTED] The sites are not
 duplicates in either the number or spacing of
 revetments, nor do they duplicate the field troop-
 training sites of Launch Area 1C with respect
 to the spacing or orientation of revetments. The
 25X1D sites were inactive on [REDACTED] photography but the
 general area showed extensive signs of vehicular
 activity.

The northeast site consists of five earthen
 vehicle revetments and a graded earth strip.
 This strip, 140 by 15 feet, appears to have a
 counterpart at the west site and is probably the
 launch point, since all the revetments are
 oriented toward it. However, it is positioned
 very close to the fence on one side of the north-
 east hexagon. The revetments range in size
 from 50 by 30 feet to 30 by 10 feet. Two are 125
 feet from the far end of the graded strip, one is

225 feet away, and two are 550 feet away. Five
 vehicles were parked near one of the revetments
 in [REDACTED] but none are present on the [REDACTED]
 photography.

In [REDACTED] several heavily used vehicle tracks
 led northeast from the general area of the train-
 ing sites and northeast hexagon and terminate
 at two scarred areas of unidentified activity.
 One area, about 1,650 feet from the general area,
 has a small earth-mounded structure 25 by 15
 feet. The other scarred area, 1,950 feet farther
 northeast--3,650 feet from the northeast hexa-
 gon--consists of several irregularly shaped,
 small darkened areas (Figure 2). It appears
 that vehicle traffic did not increase in the in-
 25X1D tervening [REDACTED] months, and the function of these
 areas has not been determined.

The west side, added between [REDACTED]
 has four earthen revetments and an unidentified
 object 75 feet long on a graded earth strip 150
 by 15 feet. The unidentified object is in a
 horizontal position, and is a suspect mock-up
 missile. The shadow reveals that it is not posi-
 tioned on a standard transporter or erector. Two
 of the revetments are 90 by 25 feet and two are
 70 by 25 feet. One is 60 feet and three are 400
 feet from the unidentified object. The eastern
 one is occupied by a building-like structure.

OPERATIONAL MISSILE SUPPORT FACILITIES

25X1D The operational missile support facilities
 are located in five separate areas, each of which
 is characterized by a drive-through building.
 Four of these areas, two warhead handling and
 checkout areas 1/ and two final checkout areas,
 25X1D appear on both the [REDACTED] coverages and
 are road served. The fifth area, a final assembly
 and checkout area which was to be rail served,
 was under construction in [REDACTED]

FINAL CHECKOUT AREA 1C

Final Checkout Area 1C (Figure 9) is located
 along the access road to Launch Area 1C, 2,500
 feet to the rear of the launch area (Figure 4). Its
 location and the amount of vehicular activity ob-
 served on [REDACTED] photography associate it directly
 with the launch area. The checkout area, which
 has a firebreak on two sides and is served by a

- 15 -

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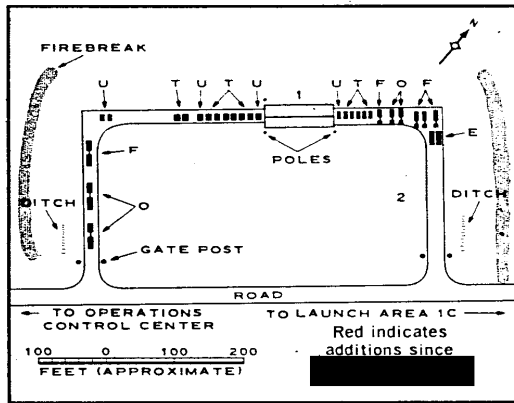


FIGURE 9. FINAL CHECKOUT AREA 1C.

road, is the least elaborate area in Complex C. No security measures are evident; however, possible gate posts, present in [redacted] were still in position in [redacted] beside the loop road at the two entrances. There also are two ditches measuring 50 by 5 feet, one near each set of gate posts. The area is rectangular, measures 530 by 370 feet, and encompasses about 4 acres. Its primary feature is a drive-through checkout building. Although there were significantly more vehicles present in [redacted] no basic changes were made between [redacted]

On [redacted] photography the area contained four possible unidentified vehicles. Photography of [redacted] revealed the remainder of the SS-4 battalion parked on the loop road in the checkout area. The vehicles included 4 oxidizer transport trailers (shown as "O" on Figure 9), 5 fuel transport trailers (F), 2 erectors (E), 13 trucks (T), and 5 unidentified objects (U). The area has a counterpart in Final Checkout Area 3C; however, the latter is much more elaborate. A detailed description of facilities in the area follows (item numbers keyed to Figure 9).

Item 1--Checkout Building. This is a gable-

roofed, drive-through structure 100 by 40 feet and 20 feet high which straddles the loop service road. It has eight windows along its southeast side. Three poles and probably a fourth, which is hidden by shadow, are located just beyond the ends of the building. They are approximately as high as the eaves of the roof, or about 15 feet.

Item 2--Possible Semiburied Tank. This structure, about 15 feet in diameter, is 120 feet east-southeast of the checkout building.

FINAL CHECKOUT AREA 3C

Final Checkout Area 3C (Figure 10) is located along the access road to Launch Area 3C, 2,300 feet to the rear of the launch area (Figure 8). The checkout area is rectangular, has a firebreak, is enclosed by two fences, the outer of which is 1,350 by 710 feet, and encompasses 22 acres. It has no guard towers or security buildings. The area is larger and more elaborate than its counterpart, Final Checkout Area 1C. It contains a drive-through building, 5 other buildings, one bunker, and 3 possible buried tanks. The facilities are served by a system of concrete roads having a minimum width of 20 feet and a minimum turning radius of 45 feet. No changes were made in the area between the two photographic missions, except that in [redacted] no vehicles were present, whereas there were six in [redacted]. A detailed description of facilities in the area follows (item numbers keyed to Figure 10).

Item 1--Checkout Building. This gable-roofed drive-through structure, 100 by 40 feet and 20 feet high, is identical with the drive-through building at Final Checkout Area 1C. It is in the central part of the area and is served by a concrete loop road. Two poles are located just beyond each end of the building.

Item 2--Possible Buried Tank. This possible tank, 20 feet in diameter, is served by a

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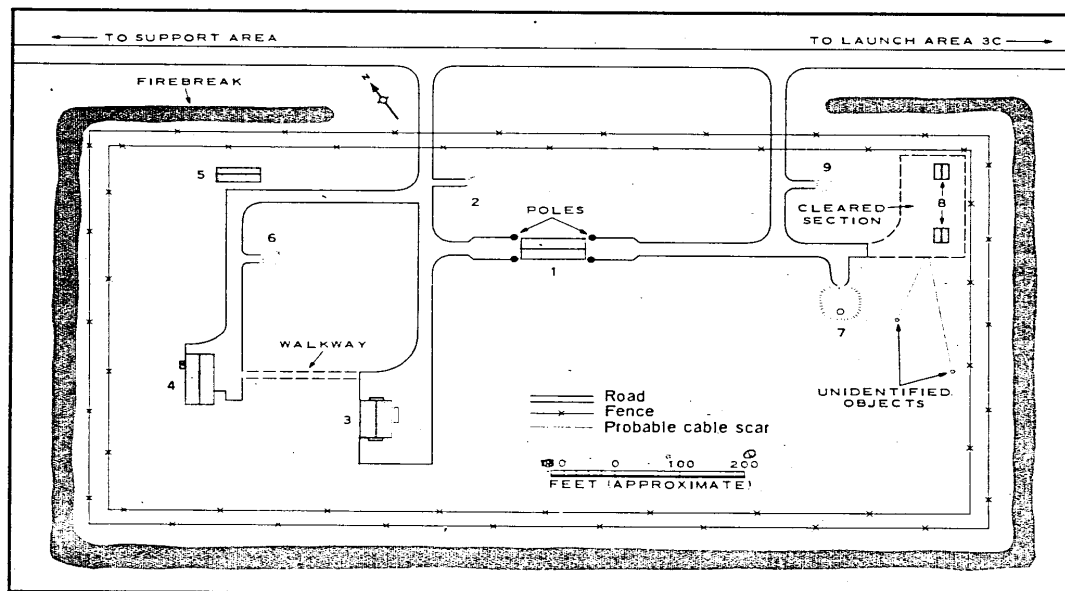


FIGURE 10. FINAL CHECKOUT AREA 3C.

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short road which branches from the western entrance road to this checkout area.

Item 3--Building. This single-story, gable-roofed building, 70 by 50 feet, is on a large concrete hardstand with pavement on three sides. The [REDACTED] coverage indicates that there are windows along the east side. At each end is a small shed. In [REDACTED] two cargo vehicles were parked by the building. In [REDACTED] an unidentified object 30 feet long and [REDACTED] wide is situated along the east side of the building.

Item 4--Building. This single-story, gable-roofed building, 90 by 50 feet, is on a hardstand served by a separate road. On the west side of the building is a small attached shed, with a short stack. These two buildings (Items 3 and 4) appear to have similar or related functions, as

indicated by the connecting vehicle tracks, connecting walkway, the requirement for a concrete hardstand, and the similarity of building configuration and construction.

Item 5--Utility Building. This building is just off the road which served Item 4. It is a single-story gable-roofed structure measuring 70 by 30 feet. It has no drive-through capability.

Item 6--Possible Buried Tank. This possible buried tank is 20 feet in diameter. It is served by a short road which branches from the service road for Item 4.

Item 7--Bunker. This earth-mounded bunker is about 65 by 65 feet and is served by a concrete drive 20 feet wide. The fact that the road has only one wide-radius turn indicates that the bunker is not associated with the two sheds to

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the northeast. On top of one end of the bunker is a ventlike object. The bunker could be used to store explosive or volatile materials.

Item 8--Two Maintenance Sheds. These sheds, each 30 by 25 feet, are in a graded, cleared section, which in [REDACTED] appeared heavily stained, possibly as the result of equipment maintenance. Three possible vehicles were in the area. In [REDACTED] the section was partially snow covered and showed no signs of activity. In [REDACTED] two small unidentified objects were located south of the graded section. Probable cable scars from the graded section lead to these objects. On the [REDACTED] photography these objects were obscured by snow.

Item 9--Possible Buried Tank. This possible tank, about 15 feet in diameter, is near the bunker and sheds (Items 7 and 8). It is served by a short road which branches from the eastern entrance road to this checkout area.

WARHEAD HANDLING AND CHECKOUT AREA WEST

This area, at 48-35-45N 46-13-20E, is situated along the main access road, approximately 4 nm to the rear of Launch Area 1C (Figure 4). The area is rectangular, is enclosed by a solid fence 760 by 480 feet, and encompasses about 12 acres. Security is provided by a 35-foot-wide firebreak, the fence, a guard tower at each corner, and a security building at the main entrance.

In [REDACTED] the area (Figure 11) contained a large drive-through building, a bunker, a probable semiburied tank, one support building, one small building or shed, and approximately 19 vehicles. The small building or shed was removed between [REDACTED]. The area in [REDACTED] contains the large drive-through building, the bunker, the probable semiburied tank, 4 support buildings (one of which is under construction) and approximately 65 vehicles and pieces of equip-

ment. A concrete loop road 20 feet wide with a minimum turning radius of 40 feet serves the drive-through building and the bunker. Just north of the main access road is a tracked-vehicle road. Between [REDACTED] two grade crossings were constructed from the tracked-vehicle road to allow access to this area. Immediately east of this area in [REDACTED] were three vehicles and two small tents. They are not present in [REDACTED]

This area has a counterpart in the Warhead Handling and Checkout Area East and is similar

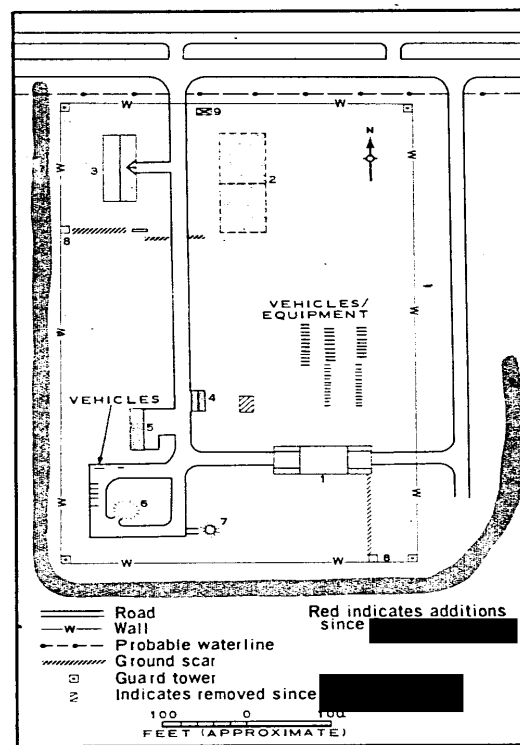


FIGURE 11. WARHEAD HANDLING AND CHECKOUT AREA WEST.

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in many respects. A detailed description of the facilities in the west area follows (item numbers keyed to Figure 11).

Item 1--Assembly Building. This is a drive-through building, 135 by 50 feet, consisting of three sections. The center section is 65 by 50 feet and 30 feet high. The two end sections are monitor-roofed, 50 by 35 feet and 10 to 15 feet high; the height to the top of the monitor is 20 feet.

The door at the east end is about 20 feet wide and high. A ground scar, from either a footpath or a buried pipe, leads south from the east end of the building to an unidentified object (Item 8) along the fence.

Item 2--Building Under Construction. This building, measuring 165 by 65 feet and under construction at the time of photography, is the largest structure in the area. When completed, it will have a floorspace of 10,700 square feet and will be divided into two sections. The absence of supporting posts indicates that the interior will be unobstructed except by a center wall. There is a ditch long running from the south end of this building westward under the main service road in the area.

Item 3--Building. This is a road-served, gable-roofed building with a dormer. It was present in and is 110 by 50 feet long.

Item 4--Building. This gable-roofed building, 35 by 25 feet, may have replaced the small building or shed which was 75 feet to the east in.

Item 5--Vehicle Shed. This structure, not present in is 70 by 25 feet. A hardstand connects it with the main service road in the area.

Item 6--Bunker. This bunker, which is 45

feet in diameter, is enclosed by a paved road. Its entrance is oriented away from other facilities in the area, indicating that it may store explosives. Seven vehicles are parked on the encircling road in.

Item 7--Semiburied Probable Tank. This probable tank, 20 feet in diameter, is 100 feet from the bunker. Access is by a narrow, graded earth strip.

Item 8--Two Unidentified Objects. These objects are each 10 feet square and as high as the perimeter fence. One, along the south wall, is connected by a ground scar, possibly from a footpath or a buried pipe to the drive-through building, and the other, along the west fence, is joined by a ground scar to a possible vehicle.

Item 9--Security Building. This building is located at the entrance to the area and is 20 by 15 feet.

WARHEAD HANDLING AND CHECKOUT AREA EAST

This area, at 48-35-45N 46-14-45E (Figure 12), is situated along the main access road, approximately 3 nm to the rear of Launch Area 3C and one nm from Warhead Handling and Checkout Area West (Figure 11). The area is rectangular and enclosed by a wall 455 by 360 feet which encompasses about 4 acres. Security provisions are a 35-foot-wide firebreak, a wall with a guard tower at each corner, and a security building at the west entrance. Facilities in the walled area include a large drive-through building, a possible bunker semiburied tank, a small unidentified object, and two support buildings. A thermal plant is outside the wall to the south. Between the coverages a small shedlike structure and an unidentified object were removed; also, the vehicle count was three in against approximately 15 in. With these exceptions, the area remains unchanged.

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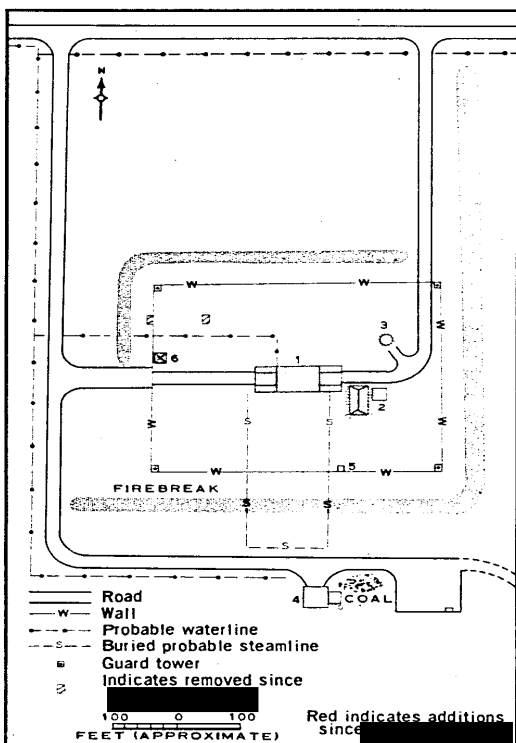


FIGURE 12. WARHEAD HANDLING AND CHECKOUT AREA EAST.

Branches of a buried probable waterline which parallels the main access road serve the drive-through building and thermal plant. Between the drive-through building and thermal plant is a buried probable steamline. A 20-foot-wide concrete loop road serves the drive-through building, and an extension to the south serves the thermal plant. No grade crossings, in contrast to those at Warhead Handling and Checkout Area West, have been constructed to allow tracked vehicles to cross the main access road.

A detailed description of facilities in the area follows (item numbers keyed to Figure 12).

Item 1--Assembly Building. This drive-through, 135 by 50 feet, three sectioned building is identical in size and function to the one in Warhead Handling and Checkout Area West.

Item 2--Two Storage Buildings. These two buildings are along the loop service road at the east end of the drive-through building. One is semiburied, has a hipped roof, and measures 60 by 30 feet; the other is flat roofed and 30 feet square.

Item 3--Possible Bunker/Semiburied Tank. This possible bunker/tank, 30 feet in diameter, is about 80 feet from the assembly building. It is served by a paved road 10 feet wide which has a wide-radius turn in both directions.

Item 4--Thermal Plant. The thermal plant, 35 feet square with a wing 30 by 20 feet, is 400 feet south of the assembly building. Adjacent is a large coal pile and a parking hardstand 110 by 90 feet. In [redacted] two trucks and an unidentified object were on the hardstand; in [redacted] the area was inactive.

Item 5--Unidentified Structure. This structure is located along the south wall and is approximately 10 feet square.

Item 6--Security Building. This building is located at the entrance of the area and is 20 by 20 feet.

FINAL ASSEMBLY AND CHECKOUT AREA, UNDER CONSTRUCTION

This Assembly and Checkout Area (Figure 13) was under construction in [redacted]. It will be rail served when completed. Other than establishment of Launch Area 2C, it is the most significant addition to Launch Complex C in the [redacted] months between coverages. There was no evidence on the [redacted] photography that the area

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was to be constructed. The potential rail service to this area probably indicates the development of a new concept in mobility or servicing of missiles in an otherwise road-served complex. In [REDACTED] the rail line was under construction from the Test and Support Complex to this facility.

The area contains a large rail-drive-through building and seven other buildings, all under construction. It is located between the two warhead handling and checkout areas but on the opposite (north) side of the road. When complete, the area probably will be enclosed by a fence, but at the time of the photography only the ends were fenced or being fenced. The fenced area will be 1,300 by 475 feet (14 acres).

Water could be provided from a buried probable waterline which is on the south side and parallels the main access road through the launch complex. Another ditch for a probable waterline is under construction on the north side of the main access road. Steam probably will be provided by a local source, since a good system of ditches extends from one building (a probable steam plant) to several of the other structures.

Earthen ramps leading to the main road to the launch areas provide access to the area. A detailed description of the facilities in the area follows (item numbers keyed to Figure 13).

Item 1--Assembly and Checkout Building. This almost completed rail-drive-through building is 200 by 130 feet and 55 feet high and has a total floorspace of 26,000 square feet. It consists of a 70-foot-wide, 200-foot-long clerestory center section flanked by two 30-foot-wide, 25-foot-high workshops. The center section has a very shallow pitched gable roof, while the two workshops have shed-type roofs. A building similar in plan and dimensions was under construction in [REDACTED] at the assembly and checkout area of Launch Complex E. The building at Complex E is road served, however. Just east of the building is a wide-gauge track, with a tower crane on the rails. Around the terminus of the rail bed is a shallow rectangular ditch. Nine small, hollow, unidentified objects about 15 feet apart are adjacent to the north side and at the terminus of the rail bed.

Item 2--Buried Tank. An earth-mounded, semiburied tank, approximately 30 feet in diame-

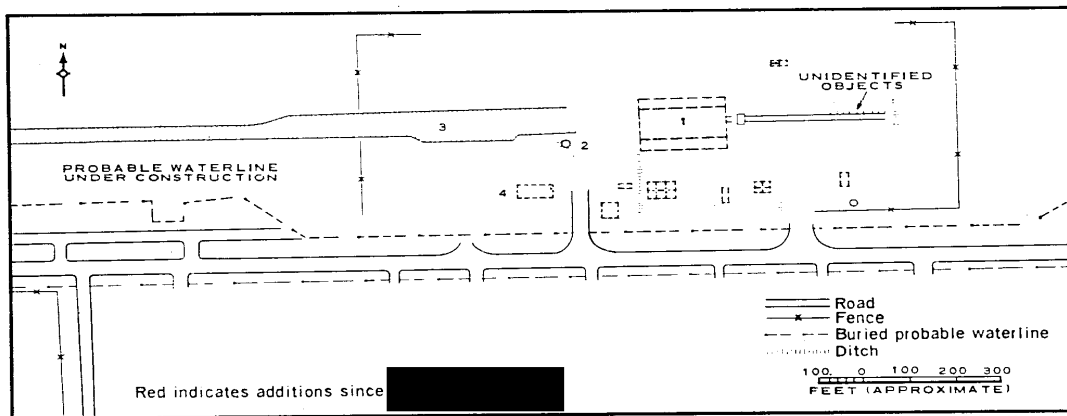


FIGURE 13. FINAL ASSEMBLY AND CHECKOUT AREA, UNDER CONSTRUCTION.

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ter, is adjacent to the rail embankment and 150 feet west of the assembly and checkout building.

Item 3--Rail Bed. This rail bed, about 25 feet wide at its narrowest point, parallels the main road from the Test and Support Complex to this area. At the time of [redacted] photography it was under construction and no tracks were in place. About 700 feet west of the drive-through building, the bed widens to accommodate multiple sidings, and a portion about 200 feet long widens further on the south side. On the east side of the building the rail bed extends for about 350 feet. Where the rail bed curves eastward to parallel the main road into Launch Complex C, a short portion continues southeast and terminates north of the road (Figure 2). [redacted]

Item 4--Probable Steam Plant. This building, which is under construction, is 85 by 35 feet and is connected by a ditch to the waterline under construction. [redacted]

Other ditches, probably for steamlines, lead from the building to other structures in the area.

Throughout the area, in various stages of construction, are seven additional buildings, the largest of which is 75 by 40 feet. No specific function can be assigned to them. Various unidentified objects and pieces of equipment are also scattered throughout the area.

NONOPERATIONAL SUPPORT FACILITIES

Nonoperational support services and functions include the entire administrative and logistical area of responsibility, including permanent housing, and service functions. In [redacted] the Administration, Housing, and Service area handled nonoperational support. In [redacted] an additional administration, housing, and service area was under construction 4,000 feet north of the first area.

ADMINISTRATION, HOUSING, AND SERVICE AREA

The Administration, Housing, and Service Area (Figure 14) is about 1,200 feet west of the junction of the main road from Kapustin Yar with the main access road through Launch Complex C. The facilities include a large administration-type building, housing, storage and maintenance buildings, a motor pool, and water, power, and heating facilities. Except for the addition of a powerline from Kapustin Yar, a power substation, and a few minor buildings, no

significant changes were made between [redacted] [redacted] The major part of the area, which includes 11 acres, is enclosed by a wall 840 by 610 feet. Several guard towers are situated along this wall. The motor pool, outside and adjacent to the southwest corner of the walled area, is fenced and measures 360 by 270 feet. The substation is enclosed by a wall 250 feet on a side. An eight-bay water-treatment facility is 1,725 feet northeast of the walled area and is connected to it by a buried pipeline.

A site containing approximately 50 tent bases, inactive in [redacted] is 500 feet southwest of the area. Near the tent bases is an athletic field and a graded hardstand. In [redacted] several vehicles or unidentified objects were adjacent to the hardstand. In [redacted] three vehicles were on this hardstand. Three excavations outside the fenced area show no change since [redacted] The entire surrounding area is characterized by track activity leading to the other facilities within the complex.

- 22 -

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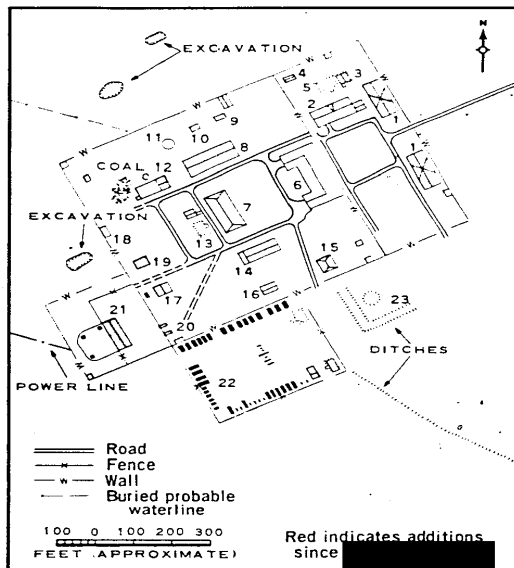


FIGURE 14. ADMINISTRATION, HOUSING, AND SERVICE AREA.

A detailed description of facilities in the area follows (item numbers keyed to Figure 14).

Item 1. Two, two-story gable-roofed barracks-type buildings, each 115 by 45 feet with centrally located dormers on both their east and west sides.

Item 2. Two-story, gable-roofed building, 110 by 55 feet, with a centrally located dormer on its north side and a single-story extension measuring 25 by 25 feet on the east side.

Item 3. Single-story revetted gable-roofed building, 30 by 25 feet with a [redacted] wing on its south side.

Item 4. Single-story gable-roofed building 30 by 15 feet.

Item 5. Earth-covered bunker, 40 by 30 feet.

Item 6. Administration building, C-shaped, multistory, hip roofed. The main portion is 165 by 60 feet, and the two wings 50 by 40 feet each.

Item 7. Building, two-story, hip-roofed, 130 by 55 feet.

Item 8. Building, single-story, gable-roofed, 140 by 40 feet.

Item 9. Two buildings, one gable-roofed, 40 by 20 feet; and one flat-roofed, 30 by 15 feet.

Item 10. Building, flat-roofed, 25 by 15 feet.

Item 11. Standpipe, 70 feet high and 30 feet in diameter.

Item 12. Thermal plant, 90 by 35 feet with a [redacted] wing on its west side. Adjacent to it are a coal pile and a stack approximately 90 feet high.

Item 13. Revetted building and earth-covered bunker the same shape and size as Items 3 and 5.

Item 14. Building, approximately 115 by 45 feet, with a modified gable roof. It was under construction in [redacted].

Item 15. Building, single-story, hip-roofed, 40 by 35 feet.

Item 16. Building, single-story, gable-roofed, 40 by 25 feet.

Item 17. Building, single-story, gable-roofed, 35 by 30 feet.

Item 18. Small shed 35 by 15 feet along the fence line to the west.

Item 19. Building (new since [redacted] flat-roofed and approximately 30 by 15 feet.

Item 20. Two possible horizontal tanks, 25 feet in diameter. (In [redacted] instead of the horizontal tanks, there were two possible vertical tanks each 15 feet in diameter.) The area also contains two or three small unidentified structures and various unidentified objects or pieces of equipment.

Item 21. Substation, new since [redacted] enclosed by a wall 250 feet on a side. The control building 100 by 30 feet is enclosed by an additional fence 225 by 195 feet. A powerline leads west and then turns north to generally parallel

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the road to Kapustin Yar. An unidentified structure, possibly a guard tower, is located in the southwest corner.

Item 22. Motor pool, fenced, 360 by 270 feet. In [REDACTED] approximately 45 vehicles were parked in the area, as opposed to approximately 30 in [REDACTED]. In the center in [REDACTED] are pieces of unidentified equipment. In the southeast corner is an earth-covered quonset-type building 40 by 20 feet. Adjacent is a flat-roofed, two-story building 40 by 35 feet new since [REDACTED]. Near the northeast corner is an earth-mounded structure 25 by 20 feet. A shallow, narrow ditch, 1,000 feet long, leads out from the southeast corner of the fence line.

Item 23. Possible bunker/semiburied tank, 30 feet in diameter, present in [REDACTED] it has a double ditch on two sides.

A waste and water treatment facility with eight sludge drying beds is located 1,725 feet northeast of the support area. Each bed is 170 by 70 feet and the entire facility is 400 by 360 feet.

ADDITIONAL ADMINISTRATION, HOUSING, AND SERVICE AREA, UNDER CONSTRUCTION

An additional administration, housing, and service area (Figure 15), new since [REDACTED] is located along the main road to Kapustin Yar, approximately 4,000 feet north of the Administration, Housing, and Service Area. It contains 13 buildings either complete or under construction and covers about 15 acres. The area is unfenced although a possible fence is under construction along most of the east side. There is no internal road pattern; however, a 20-foot-wide graded roadway encircles a portion of the building area and branches eastward to connect with the main road to Kapustin Yar. The new powerline leading to the older administration, housing, and service area passes 170 feet to the rear of this

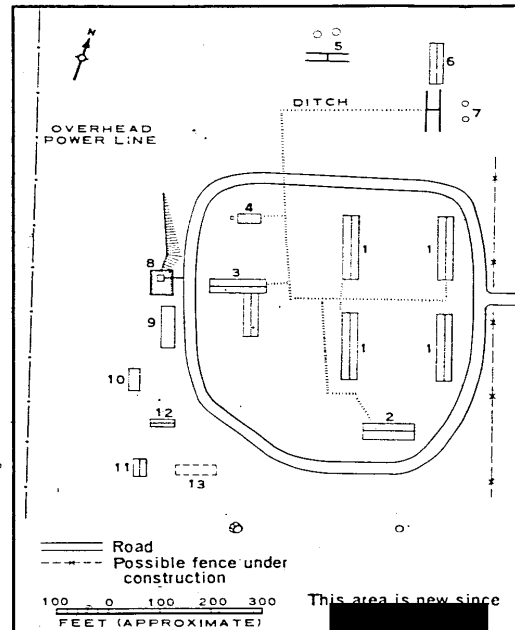


FIGURE 15. ADDITIONAL ADMINISTRATION, HOUSING, AND SERVICE AREA, UNDER CONSTRUCTION.

area. No branch line into the area can be identified. A steamline or waterline ditch interconnects 8 of the 13 buildings. A new probable waterline and a rail line, both under construction, are on the west and east side, respectively, of the main road to Kapustin Yar. In [REDACTED] the area also contained approximately seven vehicles.

A detailed description of facilities in the area follows (item numbers keyed to Figure 15).

Item 1. Four single-story, gable-roofed, barracks-type buildings, 140 by 30 feet.

Item 2. Single-story, gable-roofed, barracks-type building, 90 by 30 feet.

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Item 3. L-shaped, gable-roofed, single-story building, the main portion 100 by 35 feet and the leg 95 by 25 feet.

Item 4. Single-story, flat-roofed building, 35 by 20 feet. A protrusion to the rear may be a detached stack under construction. Of all the buildings interconnected by ditching, this is most likely to be the heat steam plant.

Item 5. Two circular excavations 10 feet in diameter and two U-shaped building foundations.

Item 6. Single-story, gable-roofed building, 100 by 30 feet. This building appears lighter in color than any of the other structures in the area. On the south side of the building, at the terminus of a dead-end ditch, are two U-shaped building foundations.

Item 7. Two circular excavations 10 feet in diameter.

Item 8. Structure, 10 feet square in a rectangular excavation, the depth of which cannot be determined. Protruding from this structure and at a slight angle upward from the excavation is an object [REDACTED]. The object may be a chute or inclined conveyer. Just north of the excavation is a linear earthen embankment which

has been graded along its eastern or interior facing.

Item 9. Single-story, flat-roofed building, 90 by 30 feet.

Item 10. Single-story, flat-roofed building, 40 by 20 feet.

Item 11. Single-story, gable-roofed building, 30 by 15 feet.

Item 12. Single-story, gable-roofed building, 40 by 20 feet.

Item 13. Building under construction, 50 by 30 feet.

BIVOUAC AREA

The bivouac area, not present in [REDACTED] is approximately 5 nm west of Launch Complex C. The area has seven sections, most of them partly over dry lake beds. Each section is set off by a plowed firebreak or vehicle trace and the area is heavily scarred by track activity. No tents have been identified, although approximately 800 square tent bases were observed.

It is estimated that each base could accommodate an 8-man tent, giving the bivouac area a capability of housing 6,400 troops.

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ELECTRONIC SITES

LAUNCH COMPLEX C INSTRUMENTATION SITES

A network of instrumentation facilities supports operations of Launch Complex C (Figure 16). Five sites, which include the Operations Control Center (Site C-1) and four instrumentation sites (Sites C-2, C-3, C-4 and C-5), are arranged in a "V" configuration symmetrically with respect to the probable direction of launch with the open end of the "V" facing east.

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C-2 and C-3 are positioned on an approximately north-south line 17 nm long. A perpendicular bisector of this line, projected eastward, is oriented along an azimuth of 95 degrees, probably indicating the direction of fire from Launch Complex C.

The instrumentation facilities associated with Launch Complex C appear similar to, and in

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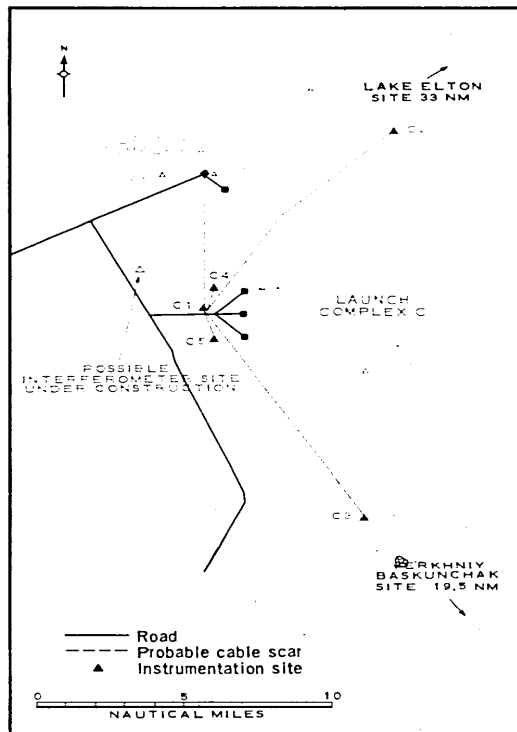


FIGURE 16. ELECTRONIC SITES.

several instances identical with those of Launch Complex A.

Operations Control Center

The Operations Control Center (Site C-1) (Figure 17) is located near the center of Launch Complex C, where the main access road branches to the launch areas, and is bounded by this road and a 35-foot-wide firebreak. In [REDACTED] it covered

an area approximately 1,000 by 800 feet (19 acres). Since then it has shown expansion, increased activity, and a rearrangement of facilities.

Like the operations control center at Launch Complex A, this site is the focal point for many probable cable scars to the complex.

The center in [REDACTED] is approximately 1,250 by 1,000 feet and covers an area of approximately 28 acres. The boundary of the firebreak was moved to include the new area. The center consists of a group of eleven buildings, seven of which are served by an all-weather access road. A detailed description of the center as it appears in [REDACTED] follows (item numbers keyed to Figure 17):

Item 1. Flat-roofed building 15 feet square.

Item 2. Structure, 15 by 10 feet.

Item 3. Unidentified object.

Item 4. Gable-roofed building, 25 by 15 feet.

Item 5. Structure 15 by 10 feet.

Item 6. 18 electronic vehicles/vans; 14 are arranged in a generally east-west linear configuration across the center of the site and 4 are in a similar arrangement but on hardstands to the north.

Item 7. Two flat-roofed buildings [REDACTED]

Item 8. Gable-roofed building [REDACTED] and [REDACTED] high, with an entrance facing to the north.

Item 9. Gable-roofed building [REDACTED] and 20 feet high, with entrance facing the access road. An unidentified object 10 feet across is 35 feet east of the building. A probable cable scar leads from this object to Item 10.

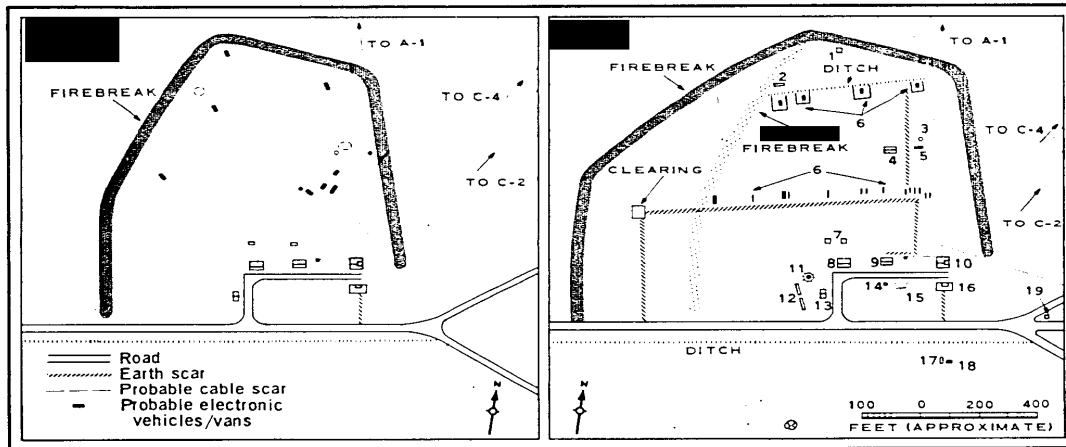
Item 10. Gable-roofed building [REDACTED] feet and 20 feet high. A platform 16 feet square, possibly used for instruments, protrudes above the ridge of the roof near one end. A short mast is in the center of the roof. This building has a line of sight to the launch areas.

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25X1D

FIGURE 17. OPERATIONS CONTROL CENTER (SITE C-1).

Item 11. Unidentified small, probably cylindrical object on a small mound.

Item 12. Two structures, each

Item 13. Gable-roofed building

Item 14. Structure 10 feet square.

Item 15. Earth-covered structure 15 feet square.

Item 16. Probable main operations building, 50 by 35 feet, with a raised center section 20 feet square and 30 feet high offset to one side. Two small unidentified objects are positioned on this raised section. Probable cable scars from the two forward sites (C-2 and C-3) and the two rearward sites (C-4 and C-5) and a probable cable scar from Complex A appear to converge near this building. An earth scar, possibly a cable or waterline, leads south from the building to the road serving the launch areas. This building,

Item 17. Building 15 feet square.

Item 18. Structure 15 by 10 feet.

Item 19. Building 10 feet square.

Site C-2

This site (Figure 18), located northeast of the control center, is fenced and contains a probable observation/control building, 5 probable electronic vehicles/vans, a possible generator building, 2 probable instrumentation positions, a probable radar on a small mound, and 2 unidentified objects. A detailed listing follows (items keyed to Figure 18):

Item 1. Probable observation/control building 20 by 20 feet. The building has a flat roof with a parapet. There are three unidentified objects within this parapet. Cables connect this building with the generator building (Item 2) and the two probable instrumentation positions (Item 4).

Item 2. Possible generator building. There is an adjacent earth-covered possible storage tank.

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Item 3. The five probable electronic vehicles/vans are parked in a row just off the southeast corner of the building (Item 1).

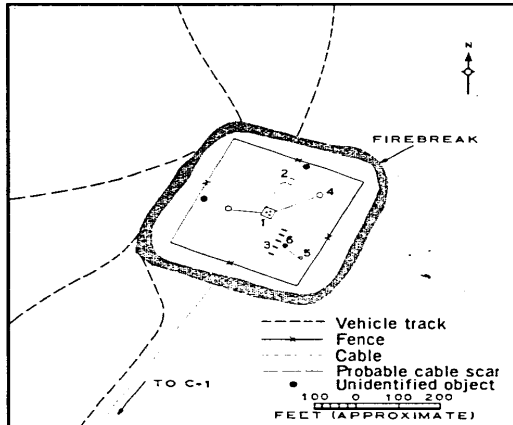


FIGURE 18. INSTRUMENTATION SITE C-2.

Item 4. The two probable instrumentation positions lie on an approximately east-west line and are located on either side of the center building (Item 1).

Item 5. The probable radar is located on a small mound a short distance southeast of the vehicles/vans near the fence. It is cable-connected to a probable mobile generator (Item 6).

Item 6. Probable mobile generator.

25X1D Photography of [REDACTED] covering this site is very poor and a good comparison cannot be made with [REDACTED] photography, although the probable observation/control building and the possible generator building appear to be present in [REDACTED]

Site C-3

This site (Figure 19), located southeast of the control center (Site C-1), is fenced and contains a probable observation/control building, a possible generator building, 3 probable instrumentation positions, two possible instrumentation positions,

a probable vehicle, an unidentified object, 20 shallow holes, and an athletics track. A detailed listing follows (items keyed to Figure 19):

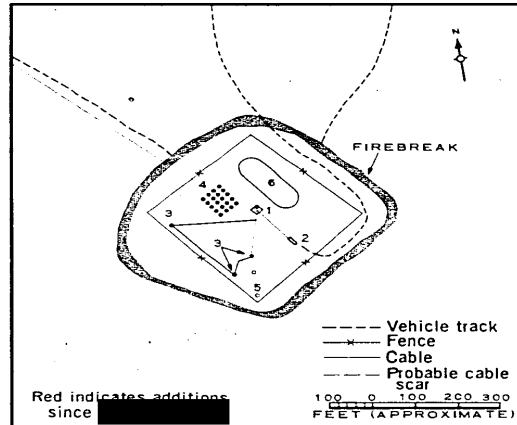


FIGURE 19. INSTRUMENTATION SITE C-3.

Item 1. Probable observation/control building 20 by 20 feet. The building has a flat roof with a parapet. There are three unidentified objects within the parapet. Cables connect this building with the possible generator building (Item 2) and the three probable instrumentation positions (Item 3).

Item 2. Possible generator building 20 by 10 feet. Adjacent is a possible earth-covered storage tank.

Item 3. The three probable instrumentation positions are south and west of the center building (Item 1) and are connected to each other and to the building by cable.

Item 4. The 20 shallow holes, new since [REDACTED] are each [REDACTED] in diameter and are arranged in rectangular gridlike patterns northwest of the center building (Item 1). Their function is not known.

Item 5. Two possible instrumentation positions are located in the southern corner

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of the site. No connecting cables could be seen.

Item 6. Athletic track.

The site shows some additions since [REDACTED] photography. These include 2 probable instrumentation positions, a possible instrumentation position, the athletic track, and 20 shallow holes.

Instrumentation Sites C-4 and C-5

Instrumentation Sites C-4 and C-5 are west of Launch Areas 1C and 3C, respectively. Site C-4 (Figure 20) is distinguished by the permanence of its facilities, whereas Site C-5 appears to be designed to accommodate mobile or semi-mobile equipment.

Site C-4. This site is approximately 0.8 nm west of Launch Area 1C and 1.1 nm from the Operations Control Center. It is fenced, measures 770 by 350 feet, covers about 7 acres, and is bounded by a firebreak. Numerous vehicle tracks and a probable cable scar connect this site with the Operations Control Center. Another probable cable scar, forming the northeastern leg of the "V" configuration and leading to Site C-2, passes by this site (item numbers keyed to Figure 20).

Item 1. Four unidentified structures or vehicles.

Item 2. Eleven probable small vehicles.

Item 3. Gable-roofed building, 20 by 15 feet.

Item 4. Gable-roofed building, 20 by 15 feet.

Item 5. Possible security building 20 by 10 feet.

Item 6. Earth-mounded structure 20 feet in diameter.

Item 7. One probable radar, cable-connected to the probable main control building.

Item 8. Building 25 by 15 feet.

Item 9. Probable main control building, gable-roofed, 55 by 45 feet. Several cables lead from this building to other facilities in the site.

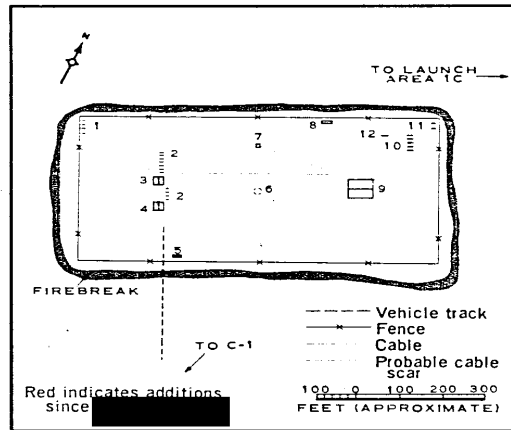


FIGURE 20. INSTRUMENTATION SITE C-4.

Item 10. Five probable electronic vehicles/vans arranged in a straight line side by side.

Item 11. Two probably cylindrical storage tanks.

Item 12. Probable small vehicle.

Site C-5. This site (Figure 21), which is approximately 0.9 nm west of Launch Area 3C and 1.2 nm from the Operations Control Center (C-1), consisted in [REDACTED] primarily of a vehicle revetment, several vehicles/vans, two possible instrumentation positions, two probable instrumentation positions, and four unidentified objects. Between [REDACTED] the appearance of the site changed somewhat. In [REDACTED] it contains two vehicle revetments, a probable instrumentation position connected by cable to a probable mobile generator, a second probable instrumentation position connected by cable with the southeast revetment, a probable instrumentation position which was present in [REDACTED] and two probable vehicles/vans parked just east of the site. No buildings were present in [REDACTED]

A [REDACTED] listing follows (Figure 21): four vehicles/vans [REDACTED] with cables leading

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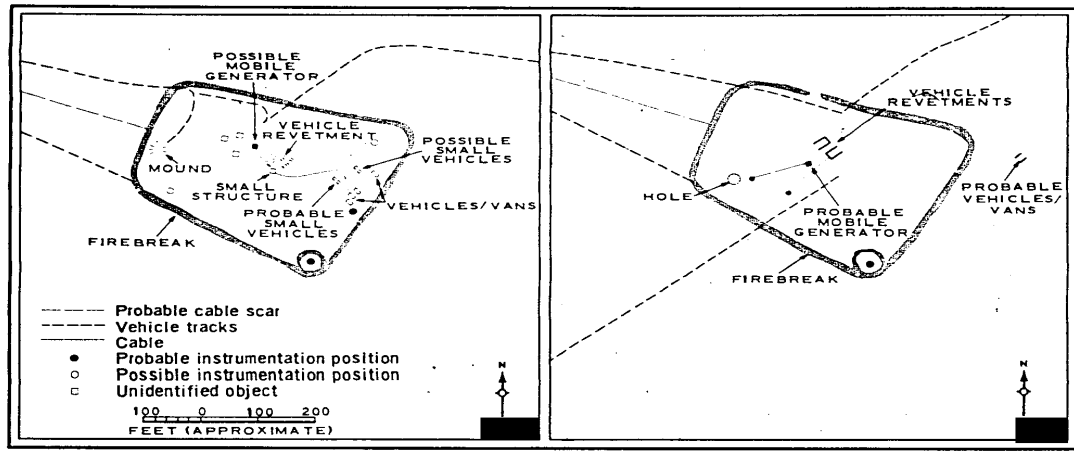


FIGURE 21. INSTRUMENTATION SITE C-5.

from two of these to an unidentified small structure; vehicle revetment 40 by 25 feet; two possible small vehicles; two probable small vehicles; possible instrumentation position; three unidentified objects; probable instrumentation position; possible mobile generator; and an unidentified object.

A [redacted] listing follows: vehicle revetments; three probable instrumentation positions; two probable vehicles/vans; probable mobile generator; hole, approximately 10 feet in diameter.

NEAR-RANGE INTERFEROMETER-TYPE INSTRUMENTATION SITES

Three instrumentation sites which were studied at the same time as the Launch Complex C sites but which probably serve as instrumentation sites for all the SSM launch complexes are included here. Two of the sites contain interferometers and the third, located in the rangehead Complex C area, has a possible interferometer under construction.

Lake Elton Interferometer Site

The Elton site is located at 49-09-50N 46-52-10E, 3 nm northeast of the town of Elton. Because of the extreme obliquity of the photography, details of this site are indistinct; accordingly no line drawing has been furnished. The site includes an interferometer, a fenced operations and support area, and an unidentified area.

Only two prominent features of the interferometer can be discerned on the photography: the characteristic outer circle, 1,000 feet in diameter; and the control bunker [redacted]. Neither the instruments nor their baselines can be identified. Numerous scars inside the circle may be significant; no particular pattern is evident.

The operations and support area is 1,800 feet northeast of the interferometer. It is enclosed by a single fence, 600 by 370 feet, and contains eight single-story buildings and a 20-foot-diameter dome. The two largest buildings are each about 100 by 35 feet. The dome is on a

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cylindrical base about 20 feet high connected to a small building.

The unidentified area is 1,200 feet north of the operations and support area, at the end of a dirt road. A number of excavations and many vehicle tracks are visible. No function can be assigned to this area, but it is described here because of its apparent association with the interferometer site.

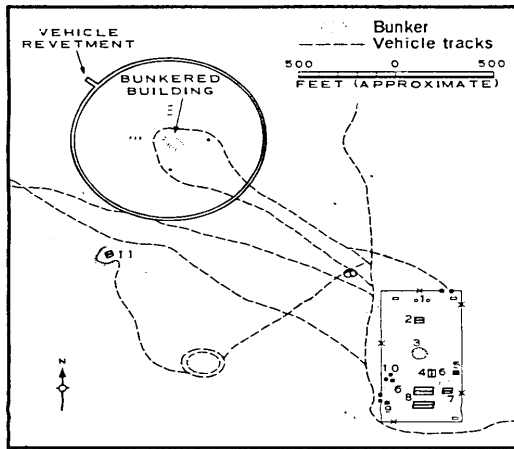


FIGURE 22. VERKHNII BASKUNCHAK INTERFEROMETER SITE.

Verkhniy Baskunchak Interferometer Site

The Verkhniy Baskunchak site (Figure 22) is at 48-11-40N 46-41-20E, 2.5 nm southwest of the town of Verkhniy Baskunchak. Similar to the Elton site, it includes an interferometer and a fenced operations and support area.

The interferometer outer track is 1,050 feet in diameter with a vehicle revetment or bunker located on this outer track. The interferometer consists of two 400-foot intersecting, perpendicular baselines. At one end of each baseline are three bunkers, 25 feet

square. The baselines are oriented on azimuths of degrees. The central control bunker measures about 60 by 15 feet.

The operations and support area is 1,000 feet southeast of the interferometer and is enclosed by a single fence measuring 810 by 430 feet. The site is similar in many respects to the Elton site, with one notable exception. Whereas the Elton site has one dome, this site has two identical domes. These two domes are also located atop cylinders positioned at one end of small gable-roofed buildings. A line drawn between these two domes has an approximately east-west orientation. The domes apparently "look" north with the buildings located on the south side.

Items in the area (keyed to Figure 22):

Item 1. Two hemispheric domes, each 20 feet in diameter and each positioned on a 20-foot-high cylindrical pedestal connected to a small building. The domes are 60 feet apart.

Item 2. Single-story, gable-roofed building, 60 by 30 feet.

Item 3. Circular excavation, 35 feet in diameter.

Item 4. Single-story, gable-roofed building 60 by 25 feet.

Item 5. Single-story, gable-roofed building 25 feet square.

Item 6. Two semiburied structures, each 37 feet square.

Item 7. Single-story, gable-roofed building 45 by 25 feet.

Item 8. Two single-story, gable-roofed buildings, each 100 by 30 feet.

Item 9. Low tower, details are indistinct.

Item 10. Three unidentified objects.

Other objects of interest within the general area include (Item 11) a gable-roofed building, 35 by 25 feet, in an abandoned aircraft revetment

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NPIC/R-1183/64

about 300 feet southwest of the interferometer and a 160-foot-diameter circular scar, possibly an old bombing target, 1,000 feet to the southeast.

25X1D Examination of [REDACTED] photography provides some evidence that the Verkhniy Baskunchak site may have been present at that time.

25X1B [REDACTED]

25X1D [REDACTED]

25X1B [REDACTED]

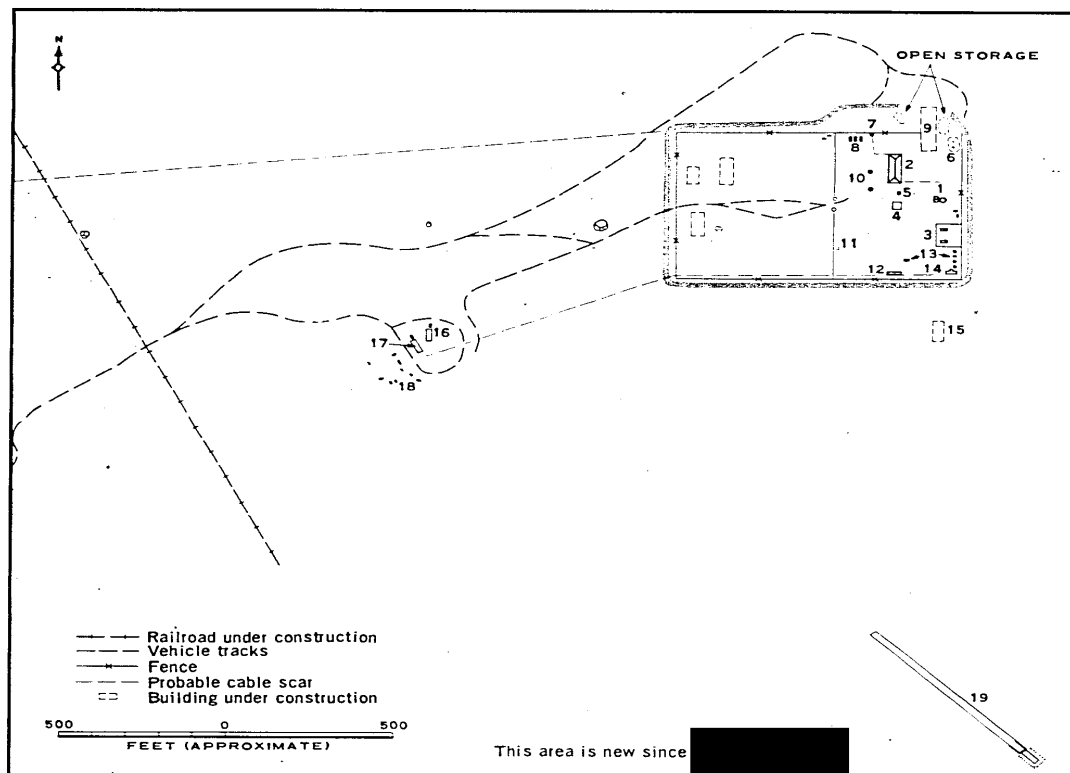
25X1D Details are not distinct enough to determine whether the site was under construction at that time. The Elton site was not visible on [REDACTED]

photography, but the photography was oblique and hazy, precluding interpretation.

Possible Interferometer Site, Under Construction

A possible interferometer, under construction in [REDACTED] (Figure 23), is located 2.7 nm northwest of Site C-1 at 48-37-40N 46-12-10E. The site, which covers approximately 50 acres, includes a fenced operations support area, an associated unfenced area connected by a probable cable scar, and a possible interferometer

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25X1D

FIGURE 23. POSSIBLE INTERFEROMETER SITE, UNDER CONSTRUCTION.

- 32 -

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NPIC /R-1183 /64

under construction containing a concrete bunker at the end of a 575-foot ground scar.

The operations support area, 860 by 535 feet, is divided into two sections by a wire fence. The west section, generally inactive, is 535 by 530 feet and contains foundations for three buildings. Significant facilities in the east section are described below (item numbers keyed to Figure 23):

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Item 1. An approximately 20-foot-diameter dome atop an [REDACTED] high cylindrical tower. Adjacent to the tower to the west is a 20- by 20-foot gable-roofed building. These domes are identical in appearance to those observed at the Lake Elton and Verkhniy Baskunchak interferometer sites. This dome "looks" east, or along the missile flight path.

Item 2. Barracks/administration building, hip-roofed, single-story, 110 by 50 feet. A probable cable scar extends approximately 100 feet to the east.

25X1D

Item 3. Two vehicles, [REDACTED] on a packed-earth hardstand 85 by 70 feet. An unidentified antenna is on the roof of one of the vans.

25X1D

Item 4. Building, slant-roofed, 30 feet square.

25X1D

Item 5. Flat-roofed structure [REDACTED] and approximately 15 feet high.

Item 6. Possible bunker, 40 by 30 feet, with two vents positioned on the roof.

25X1D

Item 7. Structure [REDACTED] and approximately 10 feet high, connected to the building, Item 2, by a probable cable scar.

25X1D

Item 8. Three electronic vans, [REDACTED] positioned on a packed-earth hardstand, 60 by 40 feet.

Item 9. Building under construction 165 by 45 feet, with construction material scattered about the building. It should be noted that a portion of the outer fence has been removed for the placement of this building.

Item 10. Two buried tanks, each [REDACTED] in diameter. 25X1D

Item 11. Five cylindrical tanks in a horizontal position, each approximately [REDACTED] 25X1D

Item 12. Structure [REDACTED] 25X1D

Item 13. Five electronic vans, [REDACTED] 25X1D

Item 14. Bunker, 30 by 10 feet.

Item 15. Building under construction, [REDACTED] 25X1D

[REDACTED] An unfenced area is located 900 feet southwest of the fenced operations area. An unimproved road and probable cable scar connect both areas. Structures which can be identified within this area are as follows. 25X1D

Item 16. A building, [REDACTED]

Item 17. A probable bunkered building, 50 by 20 feet.

Item 18. At least seven vehicles and other unidentified objects.

Item 19. A possible interferometer under construction 2,150 feet south-southeast of the operations area. The construction area contains a [REDACTED] foot bunker similar to the bunkers in the Lake Elton and Verkhniy Baskunchak interferometers. A vehicle ramp leads down below the surface of the earth to the bunker. A graded packed-earth probable roadway 575 feet long leads to the ramp. 25X1D

RANGEHEAD COMMUNICATION SITE, UNDER CONSTRUCTION

The first major, permanent communications facility identified in the KY/Vlad MTC area is under construction behind Launch Complex C. Antennas observed under construction here in [REDACTED] consist of at least two pairs of double rhombics, one for day and one for night operations. 25X1D

The antennas are 1,000 feet south of the administration, housing, and service area, at 47-37N 46-13E. It appears that more antennas are under construction but in such an early stage

- 33 -

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NPIC/R-1183/64

that no data can be derived from them. No control building has been identified. The final size of this antenna field cannot be determined as the perimeter fence has not been completed.

Data on the existing antennas are given in Table 1.

25X1D

Up to and at the time of the [redacted] photography, the major portion of communications probably was by mobile facilities. Throughout the KY/Vlad MTC there are small groups of vehicles in semipermanent positions. These are

Table 1. Data on Antennas at Communication Facility Near Launch Complex C

Antenna No	Major Axis (ft)	Minor Axis (ft)	Leg (ft)	Distance Between End Poles (ft)	Azimuth (approx)
1	705	440	400	70	[redacted]
2	425	275	235	65	
3	445	255	240	75	55-235
4	705	405	395	90	55-235

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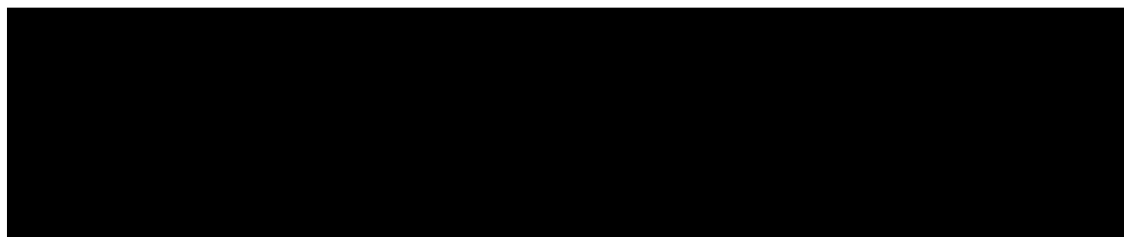
felt to be part of the mobile type communications in use throughout the range.

REFERENCES

PHOTOGRAPHY

25X1D

25X1C



DOCUMENT

25X9

25X1C



MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0235-22HL, 4th ed, May 63, scale 1:200,000 (SECRET)

REQUIREMENTS

CIA. DDI ORR E R-84/59

CIA. DDI ORR E R-84/59 Supplement

CIA. DDI PSI R-114/62

NPIC PROJECT

JN-44/59 (partial answer)

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